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# THE SOUTHERN PRACTITIONER

AN INDEPENDENT MONTHLY JOURNAL

DEVOTED TO MEDICINE AND SURGERY

NASHVILLE, TENNESSEE

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EDITOR AND PROPRIETOR

DEERING J. ROBERTS, M. D.

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VOL. XXIX

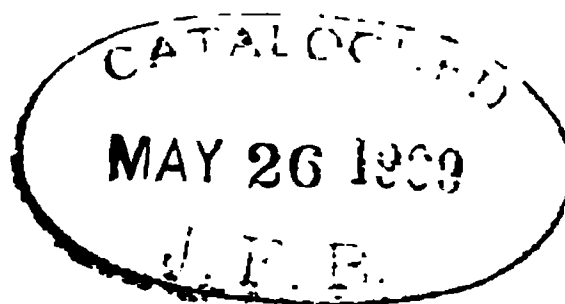
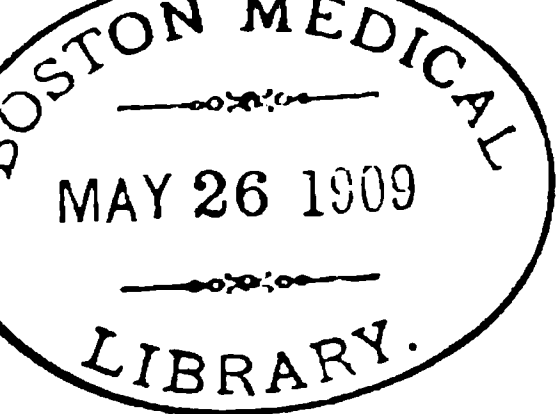
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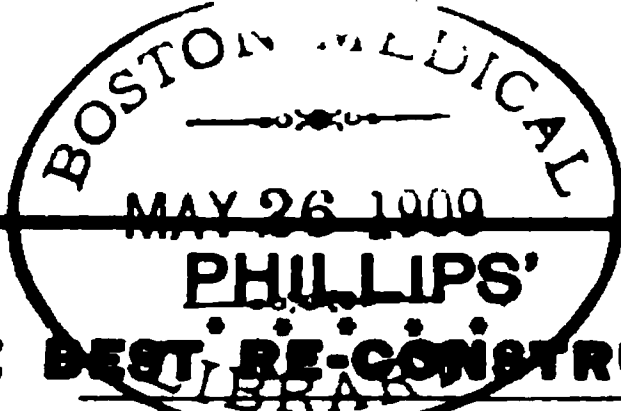
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## *Original Communications.*

### THE THERAPEUTIC VALUE OF RADIUM.\*

BY G. P. EDWARDS, M. D., OF NASHVILLE, TENN.

THE progress of the knowledge of nature in the past decade has consisted in the elaboration and verification of previously accepted theories and principles and the discovery of unknown things, which either have found a place in the existing scheme of each science, or have necessitated new theories which were more or less startling and disconcerting and in some instances tending to upset the pre-existing conception of things.

Many of these discoveries have produced revolutionary fears in the minds of scientists, but I think we can safely say that the

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\* Read at meeting of Nashville Academy of Medicine, Tuesday, Oct. 2, 1906.

recognized atomic laws have not yet been upset, nothing to lead us to conclude that we have been on the wrong path, nothing which cannot be accepted by an intelligent modification of previous conceptions. The realm of science is marked by healthy evolution and continuity. Some are disposed to decry it is at an end and in itself contradictory, its possibilities exhausted, and the miraculous hopes it has inspired have not been realized. Still others have declared that such new discoveries as X-ray, radium, and other light emanations, as also the higher electric oscillations, are so inconsistent with previous conceptions as to shake the very foundations of science, and to justify a belief in any and every absurdity of our unrestrained fancy. These persons, whether their attitude is due to self-interest, ignorance, or tradition, should be classed as the enemies of science.

The past decade stands unprecedented in history as the age of discovery of chemical elements of extraordinary type, and astounding properties, and which were developed with wonderful rapidity and exactness of demonstration. While many of these are extremely interesting it is the discovery of radio-activity and the element radium which has surpassed all others in importance, and has so far astounded the scientific world that we may well consider it a supreme privilege to have lived in the days of its discovery. No discovery in this or any other age approaches it in respect of novelty of properties of matter suddenly revealed by it. It necessitates a new conception of the structure of matter, and yet the new conception fits in with, grows out of, and justifies the accepted theories previously formulated. Before discussing this most interesting radio-activity, let us look back over a few discoveries which led up to this most wonderful revelation.

It was found that nitrogen, obtained from the atmosphere, differed in weight from nitrogen obtained from one of its chemical combinations, and the conclusion was reached that a distinct gas was present in the atmosphere which had passed for nitrogen.

This gas was separated and was given the name *argon* (the lazy one), on account of its incapacity to combine with any other element. Argon was afterward found to be impure, and it was

separated into four inert gases: argon, neon, krypton, and xenon, which were distinguished by the spectrum.

A fifth inert gas was discovered by Ramsey as a constituent of certain minerals and proved by the spectrum to be identical with an element discovered by Lockyer twenty-five years ago in the atmosphere of the sun, where it exists in enormous quantities. Lockyer gives the name *helium* to this new element, and Ramsey has found it in certain minerals in the crust of the earth. About two years ago Ramsey and Soddy discovered that helium was the product of gaseous emanations from radium.

So we are confronted with the most astounding fact, that one element is converted into another element right under our eyes; and the alchemist's dream is apparently realized, for radium decomposes into a gas which becomes another element — helium. This wonder of the age — radium — was discovered through the study of a property — phosphorescence — a glowing without heat — of glass tubes through which electric currents are passed. Three distinct kinds of streams or rays are set up in such tubes — rays which are invisible but have the property of making glass or other bodies which they strike glow with phosphorescent light.

Roentgen rays make ordinary glass give out a bright green light, but also pass through it and cause phosphorescence in various substances outside. M. Henri Becquerel became interested in the phosphorescence which was known to exist in various substances besides the vacuum tubes, and found that the light from some of these substances when subjected to sunlight, etc., was also capable of penetrating opaque bodies.

Fortunately he chose for his experiment a compound of uranium, a rare metallic element used for producing a green color in glass. He found that uranium possesses these penetrating rays on a photographic plate through opaque paper, regardless of its phosphorescence or exposure to sunlight. This new property of matter was called radio-activity, and the rays are called Becquerel rays.

From this discovery of Becquerel resulted the detection and separation of the new element — radium — apparently an easy step, yet fraught with some arduous labor and many difficult tech-

nicalities. Prof. Pierre Curie and wife became interested in the Becquerel rays, and examined an ore called pitch-blende, from which all commercial uranium is extracted. They found it four times more radio-active than uranium itself, and by a long series of fusions, solutions, and crystallizations they succeeded in hunting down and eliminating the radio-active substance. From one ton of pitch-blende they obtained one-seventh of a grain of the pure powder. The amount of radium in pitch-blende is one ten-millionth per cent; rarer than gold in sea water.

So far this is wonderful, and yet it is "simple and commonplace," "compared with what remains to be told."

If a glass tube containing radium is carelessly handled or carried in the pocket, it produces destruction of the tissues and a sore. The minutest quantity of radium brought into a room containing a charged electroscope will cause its discharge. So powerful is this electrical action that a very sensitive electrometer can detect the presence of a quantity of radium, 500,000 times more minute than can be detected by the spectroscope; that is, by the spectroscopic examination of a flame in which minute traces of radium are present.

Radium gives out both heat and light. It will melt its own weight of ice every hour, or convert from the freezing to the boiling point.

Even a small quantity diffused through the earth would suffice to maintain its temperature against all loss by radiation. If the sun consists of a fraction of one per cent. radium, it will account for and make good the heat that is annually lost by it.

Radium is continually giving off, apart from and in addition to the rectilinear darting rays of Becquerel, an "emanation" — a gaseous "emanation." This "emanation" is radio-active; that is, gives off Becquerel rays, and deposits something upon bodies brought near the radium, so that they become radio-active and remain so for a time after the radium has been removed.

This emanation is always being formed by a radium salt, and may be most easily collected by dissolving the radium in water, when it comes away with a gush as a gas. It cannot be destroyed or altered by heat or by chemical agents. It is a heavy



gas, having a molecular density of 100, and can be condensed to a liquid by exposing it to the great cold of liquid air. It gives a peculiar spectrum of its own, and is, probably, a hitherto unknown inert gas — a new element similar to argon.

The radium emanation decays; changes its character altogether, and loses half its radio-activity every four days. Precisely at the same rate as it decays the specimen of radium salt from which it was removed forms a new quantity of emanation, having just the same amount of radio-activity which has been lost by the old emanation. After being kept for three or four days the emanation becomes, in part at least, converted into helium, the light gas, second only in the list of elements to hydrogen, the gas found twenty-five years ago by Lockyer in the sun. It is deduced then that the presence of helium indicates the previous presence of radium, and hence there must be enormous quantities of radium in the sun, for we know helium is there in vast quantity.

And further, as helium has been discovered in most hot springs, and in various radio-active minerals in the earth, it may be legitimately argued that no inconsiderable quantity of radium is in the earth. There is then enough radium in the earth and sun, and probably in the other celestial bodies, to account for the maintenance of heat and electro-magnetic forces which have so long puzzled scientists. It seems not improbable that the final product of the radium emanation after the helium is removed, is, or becomes, the metal lead.

It is clearly evident then that radium is slowly but surely destroying itself. There is a definite loss of particles, which in time must result in the destruction of radium, and it has a definite limit. There is some satisfaction, however, in the fact that radium is constantly being formed afresh from the element uranium. By delicate tests it has been found that radium emanation is always present in the atmosphere, that it exists in abundance in the air in caves, that it is found in underground waters, and that many substances, such as tinfoil, glass, silver, zinc, lead, copper, platinum, and aluminum are radio-active.

The subject of research by scientists at present is whether this widespread radio-activity is due to the presence of radio-

active elements in infinitesimal quantities, or whether it is an inherent property of all matter to emit Becquerel rays.

Radium emits three different kinds of rays:—

1. The alpha rays, which are slightly deflected by an electro-magnet, and have little penetrating power.

2. The beta rays, easily bent by an electro-magnet, but in a direction opposite to that of the alpha rays, and of considerable penetrative power.

3. The gamma rays, which cannot be deflected by the most powerful magnetic force, and having great penetrating power, producing a photographic effect through a foot or more of solid iron.

The alpha rays are streams of minute particles, positively electrified, such as are thrown off by gas flames and red hot metal. The particles have twice the mass of the hydrogen atom, and they fly off with a velocity of 20,000 miles per second, or 40,000 times greater than a rifle bullet. The heat produced by radium is attributed to the impact of these particles of the alpha rays.

The beta rays are streams of corpuscles similar to those given off by the cathode of a vacuum tube. They are charged with negative electricity, and travel with a velocity of 100,000 miles per second. They are far more minute than the alpha particles, their mass being equal to one-thousandth of the hydrogen atom. They produce a major part of the photographic and phosphorescent effects of the radium rays.

The gamma rays are apparently the same, or nearly the same as the X-rays of Roentgen. They are probably not particles at all, but pulses or waves of ether produced by the ejection of the particles of beta rays. They produce the same effect as do the beta rays, but are much more penetrating. (Lankaster.)

The presence of radium causes certain substances, such as Thuringian glass, diamonds, willemite, rock-salt, porcelain, kunzite, etc., to fluoresce and phosphoresce; lead glass turns black; manganese glass violet. The germinating power of seeds is destroyed by it. It converts oxygen into ozone. Solutions of iodoform in chloroform turn deep purple, and white diamonds become a rare greenish color. When two groups of meal worms were

placed in two jars over one of which was suspended a tube of radium, many of the radiumized worms died, and those which lived showed much retardation; while those in the other jar passed through the regular cycle of life, laid eggs which grew to worms, and repeated the cycle of three or four generations, while the radiumized worms still remained mere worms.

Radium exercises especially intense action on tissues and cells in proliferation; non-fertilized eggs undergo more or less pathogenetic development and give rise to atypical formation. (Baskerville.)

From what has been learned in the preceding remarks as to the resemblance of radium rays and other rays, it is not unreasonable to expect definite physiological results from radium and radio-active substances. This was accidentally discovered by Becquerel, Curie, and others through the careless handling of radium salt. If radium be placed against the temple or any other part of the head in a dark room, a sensation of light is experienced. The application of radium to warts and moles causes them to disappear. Various effects are noted, depending on the character of the tissue or cells exposed, as well as the quantity and quality of the rays. A very interesting report of the value of radium in surgery, by Dr. Robert Abbe of New York, which doubtless many of you have noted, appeared in the *Journal of the A. M. A.*, July 21, ult.

Dr. Abbe gives his clinical experience covering a period of three years, and a list of one hundred and twenty-five cases upon which he used radium. This list contains cases of lupus, epithelioma, cancer, sarcoma, enchondroma, pigmented mole, melanoplakia, leucoplakia, ulcer of lips, warts, keloid, goiter, granulated lids, tuberculous adenitis, seborrhoea of lips, hypertrophy of tonsil, ganglion of wrist, cyst of jaw, angioma of face, tic douloureux, and uterine fibroid.

In many of these cases he reports remarkable results, in some instances designated by him as miraculous. The greatest interest centers around the new growths lupus, epithelioma, cancer, and sarcoma. He says in thirty-five cases of lupus and epithelioma not one failed to show prompt healing action. Twenty-five were

cured, with probability that many are permanent, but with a slight point of recurrence in some, which always yielded to short secondary treatment. Many of these were distinctly malignant epitheliomas. Twelve cases involved the nose extensively, four the ear, five the forehead, four the eyelids, five the cheeks, and four the chest and scalp.

On the whole, they represent slow growing epithelial cancers existing from one to twenty years. Some were so-called baso-cellular epithelioma, and others with very active mitotic figures, and all yielded equally well, regardless of the microscopic distinctions. Some had invaded and eroded cartilage of the ear or nose, which healed equally well. Others invaded and destroyed bone, and yet in some places yielded to the searching rays of radium and healed over. Little difference is shown in susceptibility to the rays, whether the disease was recent or of many years' growth. He reports in detail several very remarkable cases.

In some of the cancers of grave form, the results were not so favorable. His results in sarcoma in its various types were uniformly remarkable in curative effects. He also reports remarkable effects in exophthalmic goiter. He concludes as follows:—

1. Radium action resembles that of Roentgen rays.
2. It differs specifically and will cure some cases promptly which will resist the latter.
3. It is applicable to the interior cavities of the nose and mouth inaccessible to Roentgen rays.
4. It is curative in most superficial epithelial cancers and lupus.
5. It has failed of curative action as yet in forty test cases of grave internal cancers.
6. It produces interesting results in other surgical conditions under study.

From a personal letter from Dr. John B. Shober, of Philadelphia, I take the liberty of making the following extracts:—

“I am using the same strength and quality of radium you have. In the first place, I have learned not to be afraid of it. Duration of applications seldom less than an hour, extending often

to two, two and a half, or even three hours, every other day until some marked reaction is produced, and I would not hesitate to use it every day, if I did not use X-rays and I could see the patient often enough. This applies especially to carcinoma of the pelvis, breast, and any severe inoperable malignant process.

"Epithelioma of the skin yields remarkably to it when thus applied vigorously. It don't make much difference if you do burn them and burn them badly (though I have not done so yet). The burn is far less serious than the disease you are treating.

"Radium will abort furuncles and boils, and has a most astonishing influence in carbuncle. It will convert the carbuncle into a simple abscess. Apply over your dressings one hour morning and evening for three or four or five successive days. Improvement begins almost at once.

"I have followed Abbe's suggestion and plunged it into the body of an exophthalmic goiter, leaving it there for twenty-four hours, and have had the same happy results reported by him.

"Radium will cure or greatly relieve a supra-orbital neuralgia if applied an hour or an hour and a half over the exit of the nerve.

"The cases in which I have used radium the most are the inoperable pelvic cases, and while I have had no startling results, I think I may say that I have had no case in which I have used X-rays and radium, or radium alone, or X-rays alone, that I did not feel that the treatment retarded the onward rush of the disease and relieved pain, hemorrhages, discharge, and odor."

My own personal experience with radium covers a period of nearly two years, and during this time I have treated a variety of conditions with this wonderful element. So far as my experience has gone it accords with that of Dr. Abbe. The failures have been largely in the minority, and some of the cures have been remarkably surprising both to the patient and to myself.

I began with a radium of 7,000 activity, but soon found it to be of little value, and then I used a radium of 300,000 activity, and later a radium of 1,000,000 activity, and have recently ordered from Paris some radiums of 2,000,000 activity, the purest that has ever been made. My confidence in its virtue justifies me in risking several thousand dollars in it.

It has a place in medicine and surgery that cannot be filled by Roentgen rays or any other agent, and I am glad to supply that place in this community. I believe it is destined to be one of the greatest blessings to a great variety of sufferers.

As has been the case from the beginning all new therapeutic agents are tabooed and condemned by some members of the profession. The enthusiast is called a crank, yet we are told that nothing is ever won without enthusiasm. Each is an enthusiast in his own sphere. We have appendectomy enthusiasts, movable kidney enthusiasts, pelvic enthusiasts, proctological enthusiasts, ophthalmological enthusiasts, third tonsil enthusiasts, stomach tube enthusiasts, and blue pencil enthusiasts, so why not grant the same enthusiasm to the study of electro-therapy, X-ray, and radium?

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### PROLAPSUS UTERI.\*

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BY R. E. FORT, M. D., OF NASHVILLE, TENN.

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PROCIDENTIA UTERI when viewed practically is a hernia of the pelvic contents; though not a satisfactory classification, custom has denominated the different degrees of prolapse, as first, second, and third degrees. Prolapse of the first degree includes those cases in which we have slight uterine descent, in fact, practically all cases of retroversion may be included in this class. Prolapse of the second degree includes cases in which the cervix uteri encroaches upon the introitus vulvæ. Prolapse of the third degree are those in which we have, along with a prolapsed uterus, partial or complete inversion of the vaginal walls. The hernial sac hangs from the pubes anteriorly; and from the vaginal attachments of the rectum, the levator ani muscle and the pelvic fascia posteriorly, more or less supported by the round, utero-sacral, and broad ligaments within.

The contents of this sac, as a rule, are the uterus, a diverticulum of the bladder, tubes, ovaries, the anterior rectal wall, and

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\* Read at meeting of the Nashville Academy of Medicine, Tuesday, Dec. 4, 1906.



often coils of small intestine. The squamous vaginal epithelium becomes thickened and often assumes a skin-like appearance, and we frequently have ulcers near the cervical orifice, caused by moisture, friction, and impaired blood supply. The cervix is often, in fact, usually lacerated. The kinked and distorted uterine vessels produce a condition of metritis and hypertrophic endometritis. This intensifies the subinvolution which was primarily one of the factors in the production of the condition. The contractile power of that portion of the bladder involved in the diverticulum is destroyed, resulting in urinary stasis, cystitis, occasionally producing an ascending infection resulting in pyelonephritis. Occasionally the hernia of the bladder produces a kink in a ureter and hydronephrosis results. This is usually a reducible hernia, but occasionally a local pelvic peritonitis occurs, resulting in adhesions of the contents of the sac which renders it irreducible.

The etiologic factors and the treatment of descensus of the first degree are essentially different from those of the second and third degrees, consequently the latter two conditions only will receive consideration in this paper.

It is true that congenital defects in the vaginal outlet or the pelvic floor may supply the producing factors. This is proven by the fact that prolapse is occasionally observed in infancy. Again, complete prolapse may occur in the virgin or non-parous woman. When this occurs, it is caused by congenital pelvic defects, plus retroversion, with increased intra-abdominal pressure, the latter being caused by constant straining, or produced by heavy lifting; but the conditions essential to the production of procidentia are most frequently, practically always, found after repeated pregnancies. This is the observation of all operators, and personally, I have not seen the condition in any but child-bearing women. The pathologic evolution is about as follows: A break in the pelvic floor, retroversion, putting the long axis of the uterine body in the axis of the vaginal outlet, added weight of the uterus from subinvolution produced by sepsis, laceration of the cervix, tight lacing, or the application of a tight obstetric binder during the first ten days after labor, and a disturbed equilibrium of intra-abdominal pressure.

In detailing the contents of the sac in complete prolapsus it is obvious that uncomplicated prolapse of the third degree is rarely, if ever, present. Hernia of part of the bladder (cystocele), hernia of the anterior rectal wall (rectocele), and inversion of part of, or the entire vaginal wall, are the complications which must receive surgical consideration. When acute prolapse occurs, it is produced by violence and is accompanied by rupture of the uterine ligaments, hemorrhage, severe pelvic pain, and great shock, but this condition is very rare and deserves only passing comment.

*Symptoms* of chronic prolapse are: Interference with the functions of the bladder and rectum; backache is most distressing and is produced by pressure upon the lumbo-sacral plexus; pelvic tenesmus, produced by dragging on the pelvic blood vessels and nerves, is usually constant; painful locomotion and general nervous and digestive disturbances are present in varying degrees of intensity. It is to be noted, however, that the gravity of the symptoms and invalidism is not always present in proportion to the degree of prolapse. I have observed that the nervous instability of the patient is usually the controlling factor. For instance, in cases observed by me, it was seen that in one case there was complete prolapse of the uterus and vagina, the mass protruding seven and a half inches. Aside from a cystitis, the patient complained of no inconvenience except the mechanical discomfort of a protruding mass between the thighs. In another case the cervix encroached upon, but had not escaped from the vaginal orifice, with only a cystocele complicating, yet this patient was an invalid, constantly complaining of backache, pelvic pain, and painful locomotion.

In the past, relief of this condition has been so unsatisfactory and recurrence so frequent, that as many, or more, procedures or operations have been devised for its relief, than have been given to the profession for the correction of the retrodisplaced uterus. Every procedure, from the introduction of the pessary, to hysterectomy, with suturing of the stumps of the broad ligament to the supravaginal wall, has been used. The only methods which I will detail are those which I regard as the correct ones and which I have used with success.

Preparatory treatment is often necessary for from ten days to two weeks. An absolute indication for preparatory treatment is the presence of ulcers on the cervix or vaginal walls, for it would be manifestly hazardous to attempt plastic work upon the pelvic floor in the presence of any infection. Hot douches and the local application of nitrate of silver, sixty grains to the ounce, will correct this condition, used in combination with rest in bed and the restoration of the pelvic circulation to its proper position by the reduction of the mass. The knee-chest position has been universally used for reduction. This is an unpleasant and trying position, and one to which all women object, and the same mechanical advantages are secured by Trendelenburg's posture, and I invariably use it. Continued reduction of the mass, keeping it reduced by the enforced horizontal position, hot douches thirty or forty minutes three times a day, accomplish reduction of the subinvolted uterus. I regard pelvic massage as useless and the tampon as not only useless, but positively harmful, for even when carefully applied and frequently changed, even those of wool, almost invariably produce vaginitis. The only indication for the use of the pessary or the colpeurynter are in very old women, or women in whom there is a distinct contraindication for surgical procedure. Diabetes mellitus and bilateral surgical kidneys are about the only contraindications I would suggest, for even though general anesthesia is contraindicated, complete surgery for the correction of procidentia can be done under intra-spinal cocaine-ization.

We occasionally find cervical eversion caused by infection of the Nabothian glands. This condition is invariably accompanied by an infectious leucorrhea. It is relieved by cervical curetting, after Craig, and this must be done before any plastic surgery is attempted. In the absence of vaginal ulceration, of cervical eversion or infectious endometritis (very rare), the two to four weeks' preparatory treatment may be cut short and after four or five days' rest in bed, constant reduction of the hernia and the hot douches, plastic work may be done and involution may be allowed to take place during the following ten days, after which the abdominal work may be finished, or if all the surgery is done at one

sitting, the ventro-fixation may be done at a sufficiently low angle to allow for complete involution.

The normal supports of the uterus and vagina can never be restored, therefore we must use those surgical methods which will more nearly imitate nature. Hysterectomy, both vaginal and supra-vaginal, have often been resorted to, but they are grave procedures, and must inevitably yield some mortality, and should therefore be ruled out, if simpler methods will accomplish the result. In addition to plastic surgery, to be described later, Noble, Kelley, and others, have completed the work by taking the long axis of the uterus out of the axis of the vaginal outlet, and placing it in its normal anteverted position by the operation of suspensio uteri, after the method of Kelley. Those of us who have opened abdomens after the performance of suspensio uteri, can readily see its misapplication. From the parietal and uterine peritoneum is formed one or two suspensory ligaments, depending for their length upon the amount of tension made upon them and really of no holding power. Consequently, if we are correct in our assumption that the normal uterine supports cannot be regained, this ligament is stretched and there is a constant tendency to retro-displacement and recurrence. Contrary to the opinion expressed by most writers, I believe that the same operations are applicable to the cure of almost every case. Slight modifications in detail being necessary to meet special indications.

In reducible procidentia of the second and third degree, I would suggest the following methods carried out in the order mentioned: Curette the uterus, amputate or repair the cervix, resect the anterior vaginal wall and restore the integrity of the pelvic floor by a perineorrhaphy, and if retrocele is present, substitute for this a colpo-perineorrhaphy, and the fifth and concluding operation is the ventro-fixation of the uterus. A few comments on the value of each operation I believe will give us a better understanding of their demands.

*Curettage* is of distinct value in subinvolution and hypertrophic endometritis assisting greatly in the process of involution.

*Amputation of the cervix* lessens the weight of the uterus, especially when the organ is hypertrophied from laceration. and

it is claimed, and I believe correctly, that it promotes involution. The same claims may be made for tracheorrhaphy in the lacerated non-hypertrophied cervix.

*Resection of the Anterior Vaginal Wall.*—The value of this operation is twofold. It removes the redundant portion of the anterior vaginal wall and elevates the portion of the bladder which is a necessary part of the cystocele and is the primary cause of urinary stasis and cystitis. The cardinal points in the resection of the anterior vaginal wall are as follows: 1. A sound should be placed in the bladder for a guide during the process of separating the bladder from the anterior vaginal wall and during the introduction of sutures. 2. Care must be exercised against removing too much of the vaginal mucous membrane. 3. Avoid Stoltz's operation, or any other operation which foreshortens the anterior vaginal wall and pulls the cervix forward, thus favoring retroversion, which is a necessary condition in procidentia and the very one we are trying to relieve. The denudation may extend from the meatus to the cervix, if the cystocele demands it, but the closure should invariably be laterally.

*Perineal Operation.*—In procidentia it is usual to find the laceration or overstretching of the pelvic floor extreme, with separation of the levator muscles from each other or from their vaginal and rectal attachments. When this is true, rectocele is a prominent feature and under these conditions it is necessary to extend the lateral denudations further up the sulci. This high denudation permits of the re-attachment of the separated posterior and lateral vaginal walls to the pelvic fascia and the levator muscles. Sufficient denudation is also done here to obliterate the rectocele. No part of any of the operations requires more care or will yield better results than a careful and complete re-attachment of the lacerated pelvic fascia which separates the posterior from the lateral vaginal walls. The suture material used in all plastic vaginal work is silkworm gut tied with perforated shot, and the sutures should not be disturbed for three or four weeks, or until all danger of impairing the integrity of the recently repaired perineum has passed. I am aware that catgut is absorbable and much used,

but my experience with it in plastic work where any part of it is exposed, has not been satisfactory and I have abandoned it.

*The Abdominal Operation.*—Ninety-five per cent. of the cases who apply to us for relief are women who have borne many children, hence the continuation of the child-bearing function is not a matter of grave moral necessity. In these cases, ventro-fixation is done after the following method: The abdomen is opened, the uterus is brought into the wound, and a transverse portion of the uterine peritoneum, three fourths by one inch, is removed, exposing the uterine muscle. Now, the anterior parietal peritoneum is excised at the lower angle of the wound, one half inch laterally, removing any connective tissue attached to the posterior fascia of the recti muscles. No. 3 chromicized catgut sutures are now introduced through the fascia and muscle and reintroduced at the denuded margin of the uterus, deep into the muscular tissue, coming out at a given point beyond. Two of these sutures are used and the uterus brought in contact with the fascia, the sutures tied and buried. If large chromic catgut is not used, through and through wormgut sutures should be chosen, as it is of great importance to secure a firm fixation union before the absorption of the suture.

If the patient has not passed the child-bearing age, sterility should be guaranteed by the application of a small silk or linen ligature around each tube. If the woman is of a child-bearing age and it is desirable to continue this function, the next most efficient supporting operation is the anterior transplanting of the round ligaments after the method of Fergerson. I now have a woman upon whom I did this operation, who has passed through gestation and delivery without complication.

I will conclude by saying that I believe the results of hysterectomy will not be as satisfactory as the results from this series of operations, and as the combined operations are not grave in comparison with hysterectomy, I believe they should always be given the preference. I believe further that if done properly there will be no recurrences.

ITEMS OF INTEREST.

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BY E. S. MCKEE, M. D., OF CINCINNATI, OHIO.

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*Would you care to Paralyze your Leucocytes?* This is Metchnikoff's scientifically polite way of asking you to have one on him. This great scientist is, as is well known, a great student of the white blood cell and its phagocytic power. The leucocyte normally eats up the microbe which would otherwise destroy the man. Metchnikoff has found that a rabbit, after taking alcoholic drinks, cannot be made immune to anthrax; the leucocytes have evidently by this means been paralyzed.

*The Novelist's Idea of a Doctor.*—We find the following by Julia Street in *McClure's*: "We all agreed that the doctor knew nearly everything. He was familiar with the appendicitis operation and could find McBurney's point unaided. He knew the drama from its first inception to last night's production; he had his own theories on yacht building, on socialism, and on the great Beyond, and had demonstrated most of them." Quite neat! This last observation: How about the doctor demonstrating his theory of the great beyond? By hastening everybody's departure thither?

*An excellent dressing*, aseptic, odorless, clean, white, flexible, and adhesive consists of collodion containing five to ten per cent. of acetanilide.

*The Treatment of Burns.*—Dr. L. S. Oppenheimer, Tampa, Florida, won the prize offered by the *N. Y. Medical Journal* for the best short essay on the treatment of burns. The cardinal prerequisite, says the doctor, in the treatment of burns is the relief of pain and shock. A burn is practically an aseptic wound, hence if it has not been infected by friends, the dressing should be applied with an idea to more or less permanency. The burned area should be first painted with a one per cent. solution of picric acid, then three or four thicknesses of gauze are applied and held in place by a lightly applied gauze bandage. The pain is thus controlled in superficial burns and materially relieved in more profound ones. Healing takes place in forty-eight hours in most

of the former cases, no further dressing being required. The bed clothing and clothes should be protected from the intense yellow stain; ammonia removes it from the hands. When an ointment is indicated he recommends the following:—

℞ Icthyolis, dr. i (4.00); acidi borici, dr. ss (2.00); alumini, gr. X (0.65); adeps lanae, dr. i (4.00); petrolati, ad oz. i (30.00). M. S. Apply. or,

℞ Bismuthi subnitratis, dr. i (4.00); menthol, gr. ii (0.12); acidi salicylici, gr. ii (0.12); acidi boracici, gr. XX (1.35); unguenti simplici, ad oz. i (30.00). M. S. Apply.

If the pain and shock are great do not wait to dress the wound but administer hypodermically morphine and strychnine, or heroin and adrenalin; he prefers the latter combination. Relieve pain and shock promptly and heroically, remembering that many of these patients die from this. To hasten the separation of necrotic tissue, warm, moist, saline, antiseptic, slightly astringent applications are applied for a few days; then dry dressings are used as indicated and the moist dressings being applied as required. In removing adherent dressings great care is necessary, especially if the surfaces bleed easily. Moisten with a hot 1:2,000 bichloride solution, then drop hydrogen peroxide on the adherent portions. If sepsis develops treat as under other circumstances. If oily or pasty substances have been applied, gently wash away what you can with benzine and a 1:2,000 bichloride solution. It is not good practice to open blebs or blisters early, and frequent changing of dressing is inadvisable. He advises families and factories to keep one per cent. solutions of picric acid and gauze bandages always on hand. No other dressing in the writer's experience heals so rapidly and so universally. "Do not pin your faith to Carron oil."

*A Non-fatty Lubricant.*—Krause, of Carlsbad (*Annales des Maladies des Organes Genito-urinaires*), has devised a lubricant which consists of gum tragacanth 2.5 grammes, glycerine 10 grammes, 3 per cent. aqueous solution of carbolic acid 90 grammes. The ingredients are triturated in the cold to form a thick syrup which is soluble in water. This lubricant is aseptic and antiseptic, and acceptable and soothing to the patient's mucous



membrane. Dr. Poole (*Guy's Hospital Gazette*) finds it to be safe and efficient. It also facilitates the cleaning and promotes the preservation of gum elastic and rubber catheters. A catheter can be quickly cleansed after use by immersion in tepid water, and can be subsequently sterilized in an antiseptic solution. It is a suitable lubricant where the catheterization has to be entrusted to the patient himself or to an untrained assistant. Greasy lubricants have many disadvantages compared to Krause's preparation. They tend to prevent an antiseptic solution from penetrating the surface of the instrument, and cause the surfaces of gum elastic instruments to become rough by dissolving away the varnish with which these instruments are impregnated. Moreover, fats have a deleterious action on rubber. It is also of value as a lubricant for the finger in making vaginal and rectal examinations, but is not good for lubricating the joints of instruments.

*Hay Fever.*—It would be more proper probably to discuss hay fever at the opening of the season rather than at its close, but unfortunately "our hindsight is better than our foresight," and when we have said this in regard to hay fever, we have said a good deal. Hay fever patients were undoubtedly made rather more comfortable this year than ever before, and more were able to stay at home and after a manner attend to business. Pollantin has been used extensively and cussed and discussed. Some have found benefit in some cases and not in others. We probably have much to learn about pollantin yet, and when we have learned to apply the pollen from the proper season or the proper plant, as spring in spring troubles, and fall for fall troubles, or rag weed for one and something else for another, we will after a while have better results. Solomon Solis-Cohen wrote an epoch-making paper on the subject of hay fever (*Journal A. M. A.*), and all who have the disease to treat in self or patient should read this paper. His favorite prescription is:—

Suprarenaline, 1 part; bismuthi subcarbonate, 300 parts; zinci oxidi, 300 parts; zinci stearati comp., 200 parts. Mix and triturate well. Use as snuff. \* Also suprarenalin, 1-20 grain (0.003), made up with sacch. lactis as little as possible into a tablet and allowed to dissolve on the tongue.

Another prescription is: Suprarenalin, gr. 1-5 (0.01); adeps lannae, petrolati, adeps benzoate *aa* ʒi (4.00. M. S. For application on eyelids and nasal passages.

*For hay fever*, Thrasher recommends a spray consisting of cocaine, 1 per cent.; adrenaline chloride, 1 to 15,000 or 20,000 in normal salt solution sprayed in the nose once or twice daily, the patient reclining a few minutes after the use of the spray.

Ingalls (*Medical Bulletin*) has recently commended as a useful spray in hay fever: R Resorcini, gr. v; adrenalini chlor., gr. ss; acid. boric., gr. xv; glycerini, ʒss; aq. camphoræ, ʒss; aq. destillatæ, ad ʒij. M. S. Spray into the eyes and nose three or four times a day.

*Pelvic Pain in Women.*—Dr. Ely Van de Warker (*British Medical Journal*) holds that gynecologists have absolutely neglected the physiology of the organs that give him the most concern, and remain in the position of thirty years ago. He denies that the left sided pain so common in women is of ovarian origin. Its usual seat is about midway in the iliac fossa, a region in which the ovary is never palpated. Another painful region lies between the crest of the ilium and the lower border of the ribs on the left side. It is peritoneal inflammation, a very common disease, and not inflammation of the ovarian stroma which causes these pains. On the other hand, uncomplicated oophoritis, relatively rare, is not a painful disease. It is comparable to orchitis and epididymitis with the patient in bed with the parts well supported. Ovarian abscesses are very rare. Van de Warker reasonably doubts that the ovary can be defined at all by palpation unless much enlarged and very tender. He asks, Why is appendicitis in young girls so frequently mistaken for disease of the ovary if the latter is so easily palpated? “The shame of ablating an organ almost vital in its moral reactions for a disease that a dose of castor oil might cure is put upon us, and must be borne.” Dr. Van de Warker has yet to see a woman made better in health by the removal of the ovaries. He has scrutinized his own cases most carefully, and the after results give rise to a suspicion that is ever growing that ablation of the so-called diseased ovaries was a blunder in physiological surgery.

*Dilatory Druggists.*—The writer recently prescribed, in a suburb of Cincinnati, Cataplasma Kaolini and was unable to get it filled at any of the drug stores in the vicinity, the druggists not knowing what it was. They then took it down town to one of the leading stores, and this druggist had to call me up and ask what it was. The same thing happened with Thymolis Iodidum. Our druggists should spend less on their soda fountains and get and read the last edition of the Pharmacopœia. It has been out over a year.

*Gynecologic Souvenirs.*—Reverdin (*Revue de Gynecologie*, Paris) writes from his "anecdote" an interesting sketch of the rise and development of gynecology in France, and of various national and international gatherings of specialists. He particularly comments on the greater confidence and liability of better results when a surgeon is operating in his accustomed environment. An invitation to operate when visiting a clinic away from home should not induce a surgeon to perform an operation, involving risk of life, merely because his vanity has been flattered by the invitation and the deference shown him. He advances this merely as his opinion, but confesses that it is based on several unfortunate personal occurrences. The great benefits of visiting others' clinics and operating rooms he amply extols, saying that this intercourse with other minds and technics is one of the chief advantages of congresses, and that he does not agree with Mme. de Staël's dictum: "When men are congregated together, their ears lengthen out."

*The Pozzi "Livre d'or."*—The souvenir volume presented to Prof. S. Pozzi (*Revue de Gynecologie*, Paris) on the completion of twenty years of teaching at the Hospital Broca, is said to mark an epoch in the history of gynecology in France. Pozzi's service was the first in France to assert the independence of gynecology, and, in order to show the present standing of the science, Faure describes with minute detail an ordinary abdominal hysterectomy as done to-day in a well-equipped operating room. The present record is that ninety-five per cent. of the patients are cured by the intervention, and he thinks we have reached the limit of perfection in our technic. The surgeons of A. D. 2000 will not per-

form an abdominal hysterectomy any better, he declares, than it is done to-day, although by means of discoveries beyond our ken at present they will not have to perform the operation so frequently as we do. All the articles in this number of the *Revue* are taken from the Pozzi souvenir volume.

*Photographing the Dead for Identification.*—The London *Lancet* states that the coronor has on two recent occasions commented on the unsatisfactory character of the photographs of the unidentified dead taken by the police authorities. It adds that Dr. Miniovichi has contributed a valuable report on this subject from his experience as director of the Medico-legal Institute of Bucharest. He describes his method in the *Archives d' Anthropologie Criminelle*. He substitutes artificial eyes and gives a natural appearance to the lids by means of lead foil or by pinning them to the eye ball with small pins. The jaws are drawn together with threads, and the face drawn to a natural expression by means of pins, evacuating accumulations of gas by means of incisions in the scalp of mouth. He gives photographs of the various steps in photographing the dead, and states that he was able in one case to fully establish the identity by means of the photograph, the body having been in the water for six weeks.

*Penalty for Selling Cocaine.*—A Norfolk, Va., druggist was fined \$1,000 and costs for selling cocaine illegally. This is the maximum penalty in Virginia.

*Interstate Prescriptions Affected by New Drug Law.*—The question of physician's prescriptions has been brought before the committee in charge of the new pure food and drug law, and they refused to exempt these prescriptions from coming within the scope of the law. This would mean that any prescription put up and sold in any state, territory, District of Columbia, or insular possession, and sent out to another state, or any foreign country, "must bear a statement on the label of the quantity or proportion of any alcohol, opium, morphine, cocaine, heroin, alpha or beta eucaine, chloroform, cannabis indica, chloral hydrate, or acetanilide or any derivative or preparation of any such substances contained therein." The solution of this complication by the commission which has charge of the enforcement of these regulations will be watched with interest.

*Professional Secrecy.*—An interesting decision of fundamental importance was lately given at the high court of justice at Leipsic. A woman had contracted syphilis from a man and after his death recovered damages from his brother and heirs. The medical attendant of the deceased was summoned as a witness, but declined to give testimony on the ground that the law imposes silence on medical men in regard to facts concerning their patients. The plaintiff's council on the other hand claimed that the law of secrecy was no longer binding after the patient's death. The court decided that only the patient himself was competent to release his medical attendant from the obligation of professional secrecy, and since he had not done so it was presumed that he did not wish the facts concerning his illness to be made public after his death.

*Civil Responsibility and Syphilitic Infection.*—M. Thibierge read a most interesting paper on this subject before the Paris Society of Legal Medicine. He said that in case of sexual infection action is very seldom brought, for legal proof is decidedly difficult to obtain. Cases of infection through employment arise almost exclusively among glass blowers. A recent judgment of the court of cassation has brought such cases under the Workman's Compensation Act, although formerly they were considered to come under another act. There are the cases of the wet nurses who contract syphilis. The nurse can only obtain damages by furnishing proof that the person who engaged her to nurse the child was imprudent or negligent, and also that they knew the possibility of the child being syphilitic. So in two recent cases the parents were not assessed damages, for they were able to show that they did not suspect that they were syphilitic, and they called experts to witness that there were no evidences of syphilis about them. In both cases the children were evidently suffering from hereditary syphilis. Such decisions are possibly correct law, but they are not humane, and some way of solving the problems should be found which would give more justice to the sufferers than does the present law.

*Expert Testimony in Cases of Alleged Insanity.*—This subject has become of interest of late owing to the release of a pa-

tient from the New York Asylum for Insane Criminals on his confession of murder, and his subsequent commitment to prison on his acknowledging that he had feigned insanity on his examination by the experts at his trial. The experts were two of the leading authorities in the city, and the methods of the criminal seem to have deceived them. Interest has been intensified by the occurrence of the recent Thaw case. Interest is also added to the case by an incident in a recent trial for murder during which one of the most prominent medical experts changed his opinion as to the sanity of the criminal, appearing, in fact, first on the one side and then on the other. Various methods have been proposed to remedy the evil. That which receives most favor is the creation of a state board of medical experts, under rules and regulations established by the state. It is contended that such a state board would be carefully selected as to its membership, and if the compensation were fixed by public authority and paid out of the public treasury, impartiality would be secured.

*Novel Method of Libeling a Physician.*—The Medical Defense Union in England had two women, mother and daughter, by giving false information which constituted a libel on a physician at Kingston, when registering the birth and subsequently the death of an illegitimate child of the young woman. A well-known physician in the vicinity was Mr. Albert Max Sully, and the child was described as Arthur Albert Max Sully, and the mother described herself as Alice Sully, formerly Wray. In her defense the mother said that she had not accused Mr. Sully of being the child's father, but that the father was a person named Sully, whose whereabouts she did not know. Mr. Sully gave evidence that in 1892 he had refused to attend her any more and that since that time he had not spoken to her. He had in that year obtained a signed statement from the women retracting statements that they had made concerning him in the neighborhood. In fining them with the alternative of going to prison, the magistrate spoke of his great satisfaction that Mr. Sully had had the opportunity of clearing his character.

*Lodging House Keepers and Infectious Diseases.*—A woman musician brought a claim against a lodging house keeper for the

recovery of her baggage and was met by a counter claim. The woman took rooms for the time she was engaged at a local place of entertainment. Three days later she found that there was measles in the house and left immediately, but the landlady refused to give up her baggage until the rent of the room was paid for the full time engaged. The judge made short work of the case, pointing out that a common misfortune had ended the contract.

*Practicing in One State and Sending Medicines from Another.*—This was the plan of one Davis, who engaged a room in Memphis, Scotland Co., Mo., saw patients there, examined them, and diagnosed cases in the ordinary way, and gave them orders which they were obliged to send to Warsaw, Ill., where the medicine was put up and sent to them by express. Defendant received \$5.00 per month for such treatment. This, in the court's opinion, was clearly practicing medicine in Missouri as contemplated by the statute. The fact that the medicine was sent from Illinois did not alter the case.

*Responsibility of Hospital for Suicide of Patient.*—A hospital in Berlin has been sued by the relatives of a man who jumped out of the window while in a state of delirium. The plaintiff, the widow, stated that she had sent her husband to the hospital that he might have better supervision than at home, but he had been left alone and seized the opportunity to commit suicide. Her claim was that the suicide could not have occurred had he been properly watched. The hospital authorities said that close supervision at all times was impossible on account of the limited force of nurses at command, and they had no funds to increase this force. The judge held the nurse in charge at the time of the man's death responsible and imposed the fine asked. It was as usual a charity case.

*Abuse of Drugging.*—Dr. Horation Perkins, the medico-legal expert, described at a medical banquet the excitement and vicissitudes of an ambulance surgeon. He was summoned to a police station to examine an unconscious prisoner, who, very muddy and disheveled, lay on the floor of the cell room. The surgeon bent over and examined him, and then, rising, said in a loud, stern

voice: "This man's condition is not due to drink; he has been drugged." A policeman near by turned pale and in a trembling voice said: "I'm afraid yer right, sir. I drugged him all the way from Carey's saloon, all of two blocks."

*To Detect Arsenic in Poisoning.*—Dr. Rhys Jones (*British Medical Journal*), having his suspicions aroused in the case of a woman, pared her nails before burial and had the parings examined, acting on the theory that arsenic is deposited in the epidermal structures. Arsenic was found, and upon disinterring the body two months after death, it was found in a state of excellent preservation, and traces of arsenic were found in the viscera. No signs of disease adequate to cause death were found, but on the other hand there were no evidences tending toward foul play. The method of investigation is distinctly ingenious and should not be lost sight of.

*The Prevalence of Criminal Abortion.*—Hunter (*Medical Age*) says, "Calculations based upon correspondence with nearly one hundred physicians, there came to the knowledge of the profession seventeen abortions to every one hundred pregnancies; to these the committee believe may be added as many more that never come to the knowledge of the profession, making thirty-four, or one third, of all cases ending in miscarriage; that in the United States the number is not less than one hundred thousand, and the number of women who die from its immediate effects not less than six thousand per annum. (From report of Special Committee on Criminal Abortion, Michigan State Board of Health.) It is claimed that in the city of Chicago alone sixty thousand abortions were produced during a single year."

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## *Abstracts.*

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### COLLARGOL.

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IN the treatment of accidental and operative wounds, writes Credé in the *Münch. Med. Woch.*, No. 24, 1906, the strictest asepsis may fail to prevent germ development and primary or



secondary infection. Prophylactic antisepsis should therefore also be employed, and a simple, universally applicable, non-irritant, and effective agent is collargol, which he has for ten years used in his division of two hundred and twenty-five beds. It is at once taken up by the tissue fluids and circulates through the body, without any local caustic effect.

Thus in cases of trauma, such as complicated fractures with infected wounds, common sequelæ are necroses, lymphangitis and phlegmonous processes, sepsis, etc., no matter how carefully the wound and lesion are cleansed. Here the use of collargol assures reactionless healing, without frequent dressings. Portions of tissue that seem lost regain vitality, and an astoundingly rapid recovery follows. Every injury should be treated by this method of prophylactic antisepsis, for one never knows when an infection is now impending.

After operative procedures, no matter how carefully conducted, the method is equally advantageous. It gives a feeling of absolute security, assuring uneventful recovery; and it simplifies the matter of dressing.

Collargol may be used as a three per cent. dusting powder with finely pulverized milk sugar, which is painless and non-irritant and very much cheaper than iodoform. Or a one per cent. solution may be poured into deep wounds, cavities, the bladder, etc., in quantities of one and one half ounces. Or collargol tablets, which effect an especially energetic and sustained disinfection, since they melt very gradually, may be inserted into bullet wounds, into the crannies of a complicated fracture, and even placed on contused brain tissues. They are applied naked or wrapped in sterile gauze. The drug may also be used for syringing, gargling, eye-washes, internally in stomach wounds, and as bougies, suppositories, etc. Argyria can never occur.

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### ARHOVIN.

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DR. ERNST R. W. FRANK of Berlin writes in the *Berl. klin. Woch.*, July 30, 1906, on the experience of his urological clinic with the internal treatment of gonorrhea. There are limitations

to the efficacy of internal remedies, no matter how marked their bactericide power, because of the peculiar structure of the urethral mucosæ. The Morgagni and Littre glands and crypts are closed up rather than opened by the passage of urine, and therefore the germs in the depths of the crypts and lacunæ are entirely unaffected by medicaments excreted with the urine. Besides, the bactericide action of the older drugs has been greatly overestimated, as Valentine showed.

Some time ago Frank began experimentation with arhovin, for which a great value in gonorrhea was claimed. It is not a balsam, being a compound of diphenylamine and esterified thymylbenzoic acid. These two constituents are by no means innocuous; but in the compound, though just as powerfully antiseptic, they are entirely non-poisonous. Arhovin is absorbed per os in fifteen minutes, as the ferric chloride reaction shows. Apparently phenyl-hippuric acid forms, the thymol being changed into thymolglycuronic acid. Bacteriological experimentation done by Burchard and Schlockow and by Piorkowski shows that arhovin transforms alkaline and even ammoniacal urine into an acid one.

Frank and Dr. Heilman made a series of bacteriological tests which show that while arhovin is not capable of rendering the urine strongly bactericide, it does hinder the development of staphylo- and streptococci, and especially that of gonococci.

It is positive that arhovin is very much more valuable than the balsams by its sedative and analgesic influence on the inflamed mucosæ. One important drawback of all the older medicaments is their irritant effect on the gastro-intestinal tract and the kidneys. Even the best East Indian sandalwood oil is not free from it. Frank has seen especially severe gastro-intestinal irritation from gonosan, every patient complaining more or less of eructations, gastralgia, and nausea. On the other hand, arhovin, given for long periods to a very considerable number of subjects, never occasioned the least complaint. The patients frequently mentioned that while they always had digestive disturbances from the balsams, arhovin never caused any trouble, even when they took twelve capsules of each four minims daily.

Like other authors, Frank found that in gonorrheal and other

bacterial invasions of the urinary apparatus, arhovin greatly diminished or entirely inhibited the incidental irritation, especially in inflammatory processes of the posterior urethra and the vesical neck. He regards arhovin as an excellent aid in inflammatory and infectious urinary affections, especially in gonorrheal diseases.

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### CUTANEOUS ABSORPTION OF BETUL-OL.

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BY DR. EDMOND GROS, OF PARIS, FRANCE.

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BETUL-OL is more quickly absorbed and is not more expensive than wintergreen oil, besides relieving pain in rheumatism almost as soon as applied; it is even unnecessary to apply it to the painful part, where there is great tenderness, since in passing into the circulating media of the body, it is transformed into sodium salicylate and thus comes in contact with any inflammatory tissues through the circulation. It gives relief also in much smaller doses than is required when we administer the salicylates through the gastro-intestinal tract, since each part taken up through the skin is converted into an equal amount of sodium salicylate without being affected by or disturbing the digestive processes of the economy.

It is useful in local affections, such as tonsillitis, myalgia, etc., and has been recently applied in pruritus, prurigo, and lichen simple, and is applicable wherever we look for local anti-rheumatic results.—*International Therapeutics*, March, 1906.

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### *Obituary.*

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W. K. OTIS, M. D.—“At the regular meeting of the Second Section of the American Urological Association, held in New York on Wednesday, October 24, 1906, . . . the President, Winfield Ayres, M. D., officially announced the death of the Vice-President of the Second Section, William K. Otis, and called for

a report by the committee appointed for the purpose, to present a memorial on the Association's bereavement. In presenting the report, a member of the committee said:—

“The ties of life-long intimacy which bound most of us to Dr. Otis make his death a subject of grief to each individual. The usual set form of preamble and resolutions, therefore, were deemed inadequate by your committee to express our sorrow. ‘Billy’s’ demise is, to the older members of the Association, as if a much-loved brother had gone from us. Your committee begs to submit:—

“William Kelly Otis’s earthly career ended on September 22, 1906.

“To the members of the American Urological Association, his death is a threefold blow.

“Most of us knew him intimately from his childhood; by his decease we lose a consistent friend, a charming companion, a most estimable colleague.

“To the science of urology his death means an irreparable loss. Cut off in the midst of his career, his inventive genius is stopped; the new and useful instruments he was continually devising must now be perfected by other hands. The advances in our work he can no longer aid in developing.

“The American Urological Association loses one of its founders, one of its most active coadjutors, one of its truest adherents.

“Our Association shares with the family of William K. Otis, with the profession at large, and with that world in which true manhood is understood and appreciated, that deep grief which the death of so noble a character inspires.

“RAMON GUITERAS,

“FRED. C. VALENTINE,

“A. ERNEST GALLANT, *Committee.*”

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## Selected Articles

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### HOME AND OFFICE TREATMENT OF INEBRIETY.\*

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BY T. D. CROTHERS, M. D., HARTFORD, CONN.

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THE home treatment of inebriety has been almost entirely confined to the occasional calls on medical men for help, in cases of intoxication. The limitation and transient nature of this condition, and the speedy recovery following, seem to indicate the absurdity of calling in a physician for such a disorder.

When the symptoms of intoxication were unusual and alarming, or when the patient was unduly stupid, or wild and maniacal, the doctor was sent for. A rapid change is going on; medical men are now called frequently in cases of acute alcoholic poisoning. In large cities a considerable amount of the early practice of physicians is confined to this class.

All the large hotels employ physicians, whose principal work is treating acute stages of intoxication. Most physicians retain the old time prejudice and theories that such persons are vicious and reckless, and should suffer for their folly, and the treatment based on these theories is largely reprimands and appeals to their pride. This is wrong, and a most serious blunder, resulting in driving away a class of cases which could be permanently restored by proper treatment.

Alcoholic intoxication to the degree of stupor or delirium is as serious a pathological condition as that which follows sun-stroke, shock, blows on the head, and other lesions of the brain centers. The apparent restoration is not recovery from the functional and organic changes which have taken place in the brain. In intoxication the condition of profound toxemia and paralysis, coma, pressure on certain brain centers, states of irritation, and other very grave pathological changes. It is the culmination of acute and long continued toxines, and also the cumulation of or-

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\* Read before the Medical Society of Virginia at Charlottesville, Oct. 9-12, 1906. Reprint from *Virginia Medical Semi-Monthly*, Dec. 7, 1906.

ganic degenerations and spasmodic alterations of nerve energy. The acute symptoms may pass off and degrees of sanity appear again, but the injury has not been removed.

It is a curious question how far the organism will bear the shocks and injury from the intoxications of spirits. One author thinks that no persons ever live to become intoxicated more than five hundred times. Others consider it possible to have a thousand attacks of this character. A careful study shows that the vast majority of inebriates seldom become intoxicated more than one hundred times. The brain breaks down before that time, and death from pneumonia, hemorrhage, or nephritis is common.

It is evident that persons of this age are more sensitive to these toxic states and cannot bear spirits, either used moderately or to the point of intoxication, and the pathological effects of alcohol are more perilous and injurious than in former times.

The treatment of persons in states of intoxication is a very serious and important one, requiring the highest possible skill and study. When called in such cases the first question is to determine the most prominent exciting causes and remove them. If the patient has been drinking continuously for a long time, there is an accumulation of alcoholic and other toxins, which must be eliminated. If the person has been temperate up to a recent period, there is evidently some central irritation and exhaustion in addition to the toxins from alcohol.

If the patient has eaten excessively before the toxic condition there are not only toxins, but reflex irritants to be contended with. If the patient is maniacal and delusional, there is brain pressure as well as toxins. Other conditions referring to causes of long duration are to be considered, but in all elimination is the first measure. Cathartics, usually salines, or, if there are no counter indications, croton oil can be used, particularly if obstinate constipation has preceded the attack. Hot baths or fomentations over the body are the safest and most effective means to throw off the poisons through the skin. In a story of Dickens there is an incident of a large number of voters who were so much intoxicated that they had to be taken to the townpump, and, after

being thoroughly drenched with water, recovered, and were able to cast their ballot. This was very good practice.

All institutions where such persons are treated find hot and cold showers the most valuable remedy to break up the coma and delirium. In private practice, a tub bath or a cold pack, winding up the patient in a wet sheet, covered by a dry one, producing profound perspiration, is followed by restoration.

In delirium tremens, hydropathic measures, mainly by baths, packs, showers, and fomentations, are almost specific remedies. These, with cathartics and nutrients have proved, from experience, to be the most satisfactory measures of treatment. Among drug eliminatives, apomorphia is the safest and most effective. Given in 1-10 of a grain doses at short intervals, until profound emesis occurs, it is followed by relaxation and narcotism, from which the patient recovers without any after effects. In the delirium of intoxication it may be given by needle, and the nausea and relaxation produced, break up the mental condition at once. Given in smaller doses, say from 1-30 to 1-60 of a grain every three hours, the relaxing and sedative action is very marked. There is probably no drug so rapid in its action both as an eliminative and a relaxant as this, and where carefully watched, it may be considered safe.

Morphia and chloral are dangerous. The chloral may increase the delirium for a time, but usually acts as a profound depressant, and, being a narcotic alcohol, still farther lowers and intensifies the depression already existing.

Morphine is dangerous because it checks secretions and adds new toxines and increases the depression of the vital forces. Many deaths of persons in this condition are due to the reckless use of these drugs.

It is unsafe to give narcotics in these states for the reason that they cover up the real condition and do not assist in the elimination of the poisons present. The intoxicated person exhaling strong spirit odors and covered with perspiration, clearly points out nature's efforts to drive off the poisons, which the physician should encourage by every means in his power.

The depressant action of alcohol encourages the auto-intoxi-

cation and metabolic changes going on in the system, and narcotics in these stages are simply adding to the poisons present. The man who at a banquet becomes profoundly intoxicated is suffering from two conditions, both toxic poisoning with brain and heart pressure.

There is very likely to have been neuronc depression and exhaustion before this condition, and at all events there is a very serious spasm of the brain centers with vaso-motor paralysis, defective oxidization, and accumulation of salts or acids as well as toxins.

The question is, Will this condition pass away without permanent changes in the organism? The patient recovers, but who can tell what damage the nerve and neuronc centers have sustained and how far the vitality has been destroyed. The subsidence of the acute symptoms brings into prominence another condition, calling for medical help; namely, starvation, defective nutrition, and depressed vitality.

Very often acute gastritis appears and for this the physician is sent for. It may be the result of acidynia and states of inflammation due to the corroding effects of alcohol. Personal and home treatment, by the continued use of spirits in increasing doses until partial paralysis follows, is a most deplorable treatment.

A prominent physician recently urged this treatment, adding eggs and milk with the spirits. Any practical experience would show the perils of this treatment, which a study of the after effects will confirm. Stomach lavage with hot and cold water fomentations on the outside and along the spine, combined with rest, are the most rational methods which can be used. In addition to this, a correction of the acid conditions by alkalies and other substances are important. On the subsidence of the acute symptoms degrees of nerve irritation may appear, which call for more pronounced remedies. Insomnia, muscular trembling and various palsies are prominent.

Among the many remedies which can be used, bromide of sodium is the best, but it should never be given in small doses for any length of time. The usual plan is to give from fifty to one



hundred grains at a time, then stop for a day or two before another dose is given, in the meantime following it with hot baths and small doses of bitartrat of potassa. Lupulin, valerian or horse nettle (*solanum carolinense*) are all excellent narcotics, but they do not act uniformly. Where lupulin is markedly narcotic, it is better than others. These drugs given two or three times a day very quickly relieve the acute irritations. Sometimes codeia, or papaver, are very excellent remedies, but opium and its alkaloïds may be dangerous at this period. Their good effects are often so marked that the possibility of addiction is to be considered.

Phosphate of soda and subnitrate of bismuth are also excellent remedies, but their use should be limited to a few days. The subsidence of the stomach symptoms is often followed by an inordinate appetite. The digestion is, of course, enfeebled, and if the patient is permitted to eat without restriction other states of toxemia appear, marked by prostration, headache, and excessive nervousness. The diet should be restricted to foods that can be easily digested, and the patient should be very careful to avoid overeating. A great variety of tonics may be given during this period, among them arsenic and phosphorus are valuable. Strychnia is one of the most widely used remedies, and is the base of all quack remedies and cures. It is by no means a safe remedy: when given indiscriminately, a great variety of dangerous symptoms follow; namely, the loss of power of the lower extremities, periods of great nervousness, insomnia, and prostration, together with mental bewilderment and a dazed condition.

Exaggerated reflexes and motor hypersensitiveness point unmistakably to the poisoning from strychnia. Of course, the desire for spirits disappears early, and, if they are taken, a painful revulsion follows, and the fact that alcohol cannot be used is simply because another toxine pervades the system, which is inimical to it.

In a certain number of cases where both the motor and sensory systems have become paretic, and the neuronc exhaustion of the nerve centers continually calls for help, strychnia, combined with atropia—1-30 grain of the former to 1-200 of the latter—has

very pronounced effects. All desire for spirits disappears and the patient, no matter how seriously tempted, has an increasing repugnance for alcohol.

If the system tolerates this drug it may be used in decreasing doses for some time with the best results. It should at times be discontinued for one or two weeks, then resumed. In periodic cases, on the approach of the paroxysm, it may be given to the extent of breaking up the drink craze for the time being.

The rapid return to health after a period of intoxication must not be considered as evidence of restoration. The physician must insist that the patient requires long-continued care and treatment. The present reckless methods of treating this particular stage of poisoning and dismissing the case without any further help, except moral advice, is a reflection on the intelligence of the physician.

The following are some examples: A total abstainer, from some disappointments and other causes, drank to great stupor. After recovery from the acute symptoms his physician impressed upon him the necessity of long-continued treatment to avoid recurrence of another attack. He had an alcoholic heredity, and realizing his condition, continued under medical care for over a year, recovered, and was a very influential man for the rest of his life. Had this first attack of intoxication been treated by morphia, chloral, and other narcotics, and the patient dismissed with moral advice and warnings, a relapse would have certainly followed.

A worn-out clergyman became stupidly intoxicated and his family physician treated him for over a year with therapeutic, hydropathic, and other means and measures, recognizing the gravity of his condition and the need of prolonged brain and nerve rest; this was followed by complete recovery. In this case the usual remedies and warnings and appeals to his will power would have failed, and he would have died in disgrace.

In a third instance, an elderly man was intoxicated several times during the year, and his condition was concealed by his family. The physician discovered it by accident and insisted on a long course of medication, which, although opposed at first,

was consented to later. He was kept in bed several weeks, and for over a year was constantly under the care of the physician.

The result was a complete cure. The superior judgment of the physician, who recognized the gravity of these toxic states, and their liability to recur in the future, was rewarded in the happiest results and the warmest gratitude of his patient.

Another phase most discouraging to the physician who does not quite understand the condition, is the egotism of the patient. After recovering from the acute toxic states and the period of remorse, veritable delusions of exaltation will appear. He will assert most positively that he is well, and will never under any circumstances take spirits, and insist on full confidence in his dogmatic assertions. He spurns treatment and measures of relief, claiming that the drink craze is under the control of the will, and can be stopped at any moment.

A careful study of this condition will show, in addition to the delusional confidence and suspicious egotism, states of low vitality, with feeble powers of concentration, motor and sensory disturbances, high arterial tension with morbid thirst and hunger. Such persons will eat and sleep in an impulsive, unreasonable way, show irritability in trivial matters, and evidently be on the suspicious border line of sanity and insanity. If the patient is a periodic drinker this period of exaltation is sure to be followed by a depressive one in which spirits will be taken again, and thus his life will be a cycle of alternate depression, drinking, recovery, supreme confidence in his vigor and strength.

In a large proportion of persons there are marked symptoms of arterio-sclerosis, with atrophic or hypertrophic heart and liver. The reflexes are deranged and the sensory nerves on the surface show further disturbance. If the patient is an accidental drinker and his intoxications have been due to some unusual causes which he is not aware of, the difficulty will be less, but in this there is a field for psycho-therapeutics which will tax the highest therapeutic skill and judgment of the physician.

The following are some examples: A banker and secret periodic drinker, whose drink storms occurred once or twice a year, became very much alarmed at the depressive heart symptoms on

one occasion. The physician treated him with eliminatives and other measures for a week or more, and he appeared to recover and suggested that further medical care was useless. The physician made a very grave diagnosis and pointed out several ominous symptoms. With some hesitation he consented to a course of treatment, which continued for over a year. The physician visited him frequently, then insisted that he should come to his office; his delusions of strength disappeared, and his general vigor much improved until finally he became dependent on his physician and carried out his advice implicitly.

During the year following many symptoms of the return of the drink paroxysm were aborted, and other attacks of depression were broken up. His recovery was complete and he is now, many years afterward, a temperate man. Had the physician been dismissed after the acute stages a certain relapse would have followed before the end of the year.

In another instance, a lawyer, who had an irregular drink attack, during the intervals of which he drank in moderation, on one occasion became very ill and sent for a physician. After the subsidence of the acute symptoms, the physician diagnosed symptoms of paresis and insisted that he should receive very elaborate treatment. He consented, but during the following year revolted many times, thinking that he was entirely well, but in the end he was convinced of the faithfulness of the physician, and finally made a good recovery. Two years afterward he died from an injury, and in his will he expressed the greatest gratitude for the physician's unusual care, and supplemented it with a substantial bequest.

These instances show what the family physician could do by adding to his therapeutics psychical means and measures. There are in every community business, professional, and other persons who have drink paroxysms, and call on the family physician for help. Many of these are curable, but the gravity of their condition must be recognized and no statements of the patient concerning his own condition should be accepted, unless confirmed by the strongest evidence.

An example of failure and final success is prominent in the

following incident : A very active, noted politician drank at intervals to excess, and on all occasions sought medical help. When the storm was over he assumed complete recovery and refused to be considered an invalid. As Congressman at Washington, his attacks increased. On one occasion, a leading physician was called after he had partially recovered. He intimated to the physician that his services would not be needed farther. The physician, on making a very careful examination, announced the possibility of sudden death and the need of a lawyer to draw up a will at once. Then, by shrewd appeals to his desire to live, and the necessity of using every possible means of recovery, secured his confidence and willingness to use every means for restoration. He was kept in bed for a month, then permitted to go out, but was constantly under the care of the physician for more than a year.

His recovery was complete, and four years later he was elected to the Senate, and is now a most temperate, vigorous man. For years other physicians had been in attendance at his drink paroxysms, and, beyond the administration of morphine, salines, and good counsel, had practically failed. Had not this physician realized the conditions and carried them out vigorously, this man would have been lost.

All institutions where persons of this class are treated are full of examples of the failures of general practitioners to give the first aid to these poor, wounded victims, who later reach incurable conditions. It is this failure of the profession to give proper home treatment that is recruiting the army of inebriates.

There is always an early stage in inebriety which is curable, and treatment at this time would save them from a worse than living death. The office treatment of inebriates is as much neglected as that of home treatment. Patients come suffering from the drink craze or its after effects, hoping to receive some drugs that will drive out the morbid impulse of spirits and break up the exhaustion and suffering which follow. Often they are in a remorseful stage and are really anxious to be helped. At other times they are maudlin and delusional.

Many such persons are incurable, and cannot be depended on

to make the least personal effort when away from the office. Often they come from the families of our patrons and acquaintances, and, when not drinking, are respectable people. Their motives, in many cases, are to get temporary help and not to stop the use of spirits. A careful study would point out the exciting causes, the removal of which would be followed by restoration. Thus, in one instance, an over-worked, under-fed neurotic who found alcohol helpful, was cured by changing the conditions of living. In another instance bad diet and worse ventilation provoked the use of alcohol, and, when these were removed, he recovered.

In a third case night work and bad surroundings were the exciting causes. Thus the list of preventable causes, ascertained by careful study open up a new field of treatment of immense importance.

The craze for drink is a psychosis and a condition that is often overcome by eliminatives. In addition to these, concentrated solutions of quassia have a most powerful influence in temporarily breaking up the drink craze. Given every hour in one or two ounce doses, all taste for spirits is overcome, and the effects of alcohol are positively painful. In the course of twenty-four hours or more the patient is disgusted with spirits, both from revulsion and the disagreeable sensations which follow. Then, solutions of strychnia may be given of 1-30 grain combined with 1-200 of atropia, taken four times a day for a couple of weeks, always stopping for a week or more, then resuming it. Tablets containing these drugs are most convenient for office practice. The after treatment consisting of baths, acid waters, and solutions of lupulin at night are often successful.

Efforts to give temporary relief are noted by the following examples: A prominent lawyer who was to be a candidate in a coming convention applied to a physician for help to prevent him from drinking.

He was given large doses of quassia for several days before the convention, with pills of atropia and strychnia at night. He passed through this period without the least impulse to drink, and later continued the treatment and became a total abstainer.

Another man, who had always become intoxicated at the annual banquet of his college society, was treated in this way, and, to the surprise of his friends, he refused all offers to drink on this occasion. He was so much pleased that he, too, continued the treatment and permanently recovered.

A third incident was that of a half crazed, trembling inebriate, calling at the office of a physician, and, in a most pathetic way, describing the impulses he had to kill his wife and child and commit suicide, thus ending the suffering. He had called on a number of different physicians, who had all turned him away in disgust, some giving him money, others morphia and spirits.

The physician gave him a large dose of apomorphia, and after free vomiting, gave him a bed in his stable. This was repeated during the day and night, and the next day he was able to go home. The physician continued the treatment and followed the case up regularly for several months until full recovery followed.

Later the man prospered and became the owner of a great manufacturing concern, and was one of the warmest friends of this physician, and years afterward, when the physician became an invalid, rendered most valuable pecuniary help.

These are by no means unusual or startling instances. The possibility of their occurrence is not unusual in the practice of every physician. At present, thoughtless physicians give placebos, morphia, chloral, and other narcotics to these office patients, and not unfrequently they are found dead a few hours later.

An instance of this kind is now in court, where the physician gave morphia to an office patient under the influence of spirits, and later the patient was found dead in an out-building, and the physician was arrested. All forms of chloral, morphine, and similar narcotics are dangerous and whenever given the patient should be carefully watched. Apomorphia in small doses is a safe sedative, but the patient must be seen at intervals. Solutions of quassia are safe, and if the patient will repeat them often enough, he will not use spirits long.

The armies of inebriates seen at the police station courts for intoxication are in the terminal stages of degeneration. How many of these persons could have been cured and made good citi-

zens if they had been treated medically in the early stages no one can tell, but there is abundant evidence accumulating by every advance of science that inebriety, and the psychosis of drink, can be prevented and checked in the early stages, and that it should be treated and studied with as much care as that of any other disease. A large proportion of all the inmates of hospitals and sanitariums in the advance stages should have been prevented by early treatment both at home and in the office.

The time is not far distant when every medical man of the country will recognize the gravity of acute intoxication and treat such persons successfully. Where the treatment cannot be carried out at home, hospitals and sanitariums will assist in removing the acuteness of the conditions and securing a degree of restoration, which can be followed up by the family physician at home.

Inebriety and drug taking are curable ailments which are in every neighborhood, and are in close relation with our home life, our professional and business circles; they are among us, and appeal unconsciously for help. In our stupidity and indifference we fail to recognize the physical condition and act on the still more stupid theories of vice and moral depravity, and permit such persons to grow up in our midst and become literally insane, without doing anything for them. This is the new field of medicine unoccupied at our doors with its tremendous possibilities of cure and prevention, which I beg of you to take up and study.

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### *Editorial.*

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"WHERE ARE WE AT?" YES, WHERE ARE WE? AND WHO  
"DONE IT"? — "PALMAM QUI MERUIT FERAT."

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IN commencing our editorial efforts for the 337th number of this journal, the first number of the 29th volume, we thought that we might take a little "look around" on what had been accomplished in the "Healing Art" during the now nearly a third of a century which had elapsed since our "little bantam" had pipped its shell. We have seen many changes, advances, and movements of true progress along many lines. Even anatomy, the very foundation of medicine and surgery, has seen some progress,



and while the organs, tissues, bones — the very elements themselves, both organic and inorganic — are the same to-day as "in the beginning," yet, in modes of study and teaching, in the relation of parts and organs, in minute and microscopical work, in structures not heretofore fully understood, there has been such progress and advance that the veriest tyro or neophyte of to-day knows more than did the erudite teacher of thirty years ago.

In physiology there have been advances possibly even more marked; in chemistry and physics, the new elements, a better understanding of various dynamic forces, the X-ray, radium, etc., with other developments perhaps not so striking, but none the less important and valuable, progress has been observed; the histology of the present is an entirely new science, and in materia medica and pharmacy there have been changes indeed, as have been recorded by the three decennial revisions of the U. S. P., slow as it is and often behind the times; some of these changes of great importance, with others of minor degree, but which can well be claimed as betterments and improvements.

In the "practical departments or branches," we may mention first, although man is yet born of woman as in the days of the sons and daughters of Eve, obstetric art and science as taught and practiced has been simplified and helped, the mortality of mother and offspring diminished, even though pain and travail yet linger in the land; and gynecology and abdominal surgery are almost entirely newly developed fields emanating from the departments of obstetrics and surgery, and now claim the entire attention of some of the ablest, the most earnest minds, the most sincere and tireless workers who have been attracted to a study of prolonging life and relieving suffering since the days of Hippocrates and Galen, and who have evolved most wonderful developments. In general practice and in surgery, as in the special departments of the eye, ear, nose, and throat, while we find in a number of instances the teachings of the fathers yet hold good, in a number of others there has been a very material advance. Possibly our treatment of pneumonia is not as free from fatalities as it was thirty years ago, and we are still content if there is no more than an inch of shortening in a fractured femur; apoplexy, renal and cardiac diseases still claim their victims; yet, the more judicious use of rational remedies, a better attention to dietetics, asepsis, a better knowledge of inflammation (if there is such a thing), a more correct knowledge of infection, etc., have rendered the practice of medicine and surgery a far different science and art than ever before.

The limited scope of a monthly medical journal will not permit full details extending back beyond a generation, and we can make but a mere suggestion of a few of the many developments that have accrued. The doctor of to-day who was in the harness then, even though he has been forced to become a back-number, and has retired from regular work, only

knows too well that his retirement has been the result of not keeping abreast of his science and art as it has advanced; and if he is still in active work, he can readily see what a task it would be to even enumerate the changes that have taken place. Even the young practitioner on whose diploma the ink is but scarcely dry, or the medical student, with a mere glance at the text-books of a few years past, can recognize that this is a day of progress along all lines, and our science and art have not been dilatory or backward in the least degree.

However, results constitute the best criterion of success; and while we can see that much has been accomplished for the relief of suffering and the lengthening of the span of life by the marked progress along all lines of our progressive profession, the question arises, To whom belongs the greatest meed of praise? To this we answer unhesitatingly that to preventive medicine and sanitation the greatest credit is due. All the practical branches have been greatly improved by a better, a more definite understanding of the laws of hygiene and sanitation, to say nothing of the great work that has been accomplished in connection with epidemic diseases. Although Jenner to a great extent robbed smallpox of its terrors, it has been left greatly to subsequent years to put fully into effect his great advance; and by taking hold of this particular disease in a proper manner, the German government has almost entirely excluded it from that entire empire, and other countries who follow as correctly and as rigidly the great prophylactic measures will have just as good results.

While the particular locality in which we ourselves live has in the past suffered extremely from epidemic cholera, through careful preventive measures it has not made its advent here since the first volume of this Journal was published in 1879. Yellow fever we can now recognize as a "thing of the past," so far as this country is concerned, provided we carry out the teachings of the very recent past; and so may we expect similar results to be accomplished in connection with other devastating infections, under the farther advances that may naturally be expected as a result of carrying out the correct principles of preventive medicine and sanitary science.

The Isthmus of Panama has long been regarded as a veritable hotbed of febrile diseases, all more or less destructive of life, and during the efforts made by the French people under De Lesseps to construct a canal, the death rate was not only terrific, but had much to do with that stupendous failure. However, under the effective measures of prevention and sanitation during the past year, under the management of Dr. W. C. Gorgas, who has been invested with full powers and proper equipment, the results have been more than marvelous and remarkable. Only a few weeks ago we had the pleasure of a very pleasant interview with Dr. Jas. M. Melton, a young physician reared and educated in this city, who was on a visit to his home people on leave of absence, after a full year's service in field

and hospital work under the control of the Canal Commission. His statements were more than remarkable, and even in our own somewhat extended experience in connection with semi-tropical diseases, we can but regard the facts as cited by him from direct personal observation as absolutely marvelous. Especially so, when we consider that fully seventy-five per cent. of the operatives now engaged on canal work are the native West Indian negroes, a class not even so well developed, or so well educated in caring for themselves as the negroes in this section; and yet, the mortality is perfectly astonishing.

The recent message from President Roosevelt referring to the Panama Canal contains a thorough substantiation of the results as stated by Dr. Melton, and we make somewhat extended extracts from the same; the entire message, however, is well worth a careful reading by the busiest of our friends, as showing just what has been accomplished, and greatly as a result of the advances and progress along the lines of preventive medicine and sanitation. We may have something more to say on this subject at a later day, especially with reference as to what this great country can expect if the developments of the present alone are fully carried out. However, we will close this somewhat cursorily written editorial by the following extracts from President Roosevelt's message, delivered to Congress December 17, ult.

"Just at present the health showing on the Isthmus is remarkably good—so much better than that in most sections of the United States that I do not believe that it can possibly continue at quite its present average. Thus, early in the present year a band of several hundred Spaniards were brought to the Isthmus as laborers, and additions to their number have been made from time to time; yet since their arrival in February last but one of those Spaniards thus brought over to work on the canal has died of disease, and he of typhoid fever. Two others were killed, one in a railroad accident, and one by a dynamite explosion. There has been for the last six months a well-nigh steady decline in the death rate for the population of the zone, this being largely due to the decrease in deaths from pneumonia, which has been the most fatal disease on the Isthmus. In October there were ninety-nine deaths of every kind among the employees of the Isthmus. There were then on the roll 5,500 whites, seven eighths of them being Americans. Of these whites but two died of disease, and as it happened neither man was an American. Of the 6,000 white Americans, including some 1,200 women and children, not a single death has occurred in the past three months, whereas in an average city in the United States the number of deaths for a similar number of people in that time would have been about thirty from disease. This very remarkable showing cannot of course permanently obtain, but it certainly goes to prove that if good care is taken the Isthmus is not a particularly unhealthy place. In October, of the 19,000 negroes on the roll, 86 died from disease, pneumonia

being the most destructive disease, and malarial fever coming second. The difficulty of exercising a thorough supervision over the colored laborers is of course greater than is the case among the whites, and they are also less competent to take care of themselves, which accounts for the fact that their death rate is so much higher than that of the whites, in spite of the fact that they have been used to similar climatic conditions. Even among the colored employees it will be seen that the death rate is not high.

"In Panama and Colon the death rate has also been greatly reduced, this being directly due to the vigorous work of the special brigade of employees who have been inspecting houses where the *stegomyia* mosquito is to be found, and destroying its larvæ and breeding places, and doing similar work in exterminating the malarial mosquitoes — in short, in performing all kinds of hygienic labor. A little over a year ago all kinds of mosquitoes, including the two fatal species, were numerous about the Culebra cut. In this cut during last October every room of every house was carefully examined, and only two mosquitoes, neither of them of the fatal species, were found. Unflinching energy in inspection and disinfecting and in the work of draining and of clearing brush are responsible for the change. I append Dr. Gorgas' report on the health conditions; also a letter from Surgeon-General Rixey to Dr. Gorgas. The Surgeon-General reported to me that the hygienic conditions on the Isthmus were about as good as, for instance, those in the Norfolk navy yard.

"Corozal, some four miles from La Boca, was formerly one of the most unsanitary places on the Isthmus, probably the most unsanitary. There was a marsh with a pond in the middle. Dr. Gorgas had both the marsh and pond drained and the brush cleared off, so that now, when I went over the ground, it appeared like a smooth meadow intersected by drainage ditches. The breeding places and sheltering spots of the dangerous mosquitoes had been completely destroyed. The result is that Corozal for the last six months (like La Boca, which formerly also had a very unsanitary record), shows one of the best sick rates in the zone, having less than one per cent. a week admitted to the hospital. At Corozal there is a big hotel filled with employees of the Isthmian Canal Commission, some of them with their wives and families. Yet this healthy and attractive spot was stigmatized as a 'hog wallow' by one of the least scrupulous and most foolish of the professional scandalmongers who from time to time have written about the Commission's work."

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THE RUTHERFORD COUNTY MEDICAL SOCIETY met at the offices of Drs. Murfree, Murfreesboro, Wednesday, Dec. 5, 1906, and also on the 19th of the same month.

At the meeting on the 5th of December Dr. E. H. Jones read a very instructive essay on the subject of "The Business Side of the Profession," and Dr. J. B. Murfree, Sr., the retiring president, delivered before the

society a most eloquent presidential address on the subject of "Medical Ethics."

The report of the committee composed of Drs. Rufus Pitts and A. J. Jamison appointed at the last meeting to distribute the one thousand copies of "The Great American Fraud" purchased by this society, was then heard and received, and the committee was discharged.

The following resolution, presented at the last meeting by Dr. Rufus Pitts, Secretary, was adopted: "*Resolved*, That beginning with the regular meeting of Dec. 5, 1906, the meetings of this society shall be held on the first and third Wednesdays of each month.

Officers elected to serve for the ensuing year: President, Dr. William C. Bilbro; Vice-President, Dr. Harry C. Rees; Secretary and Treasurer, Dr. Rufus Pitts; Delegate to the next meeting of the State Medical Association, Dr. J. B. Murfree, Sr.; Delegate alternate, Dr. E. H. Jones; Member of Board of Censors, Dr. G. W. Crosthwait.

Members present at this meeting: Drs. J. B. Murfree, Sr., E. H. Jones, S. C. Gregg, A. J. Jamison, H. C. Rees, W. C. Bilbro, J. J. Rucker, and Rufus Pitts.

At the meeting of December 19, the following report was heard and received, and the resolutions contained therein were adopted by the Society:—

*To the Rutherford County Medical Society:* The undersigned, a committee appointed at the last meeting of your society to prepare and submit resolutions expressive of the sense of this society in regard to the regulating and collecting of fees for services rendered to the public by the individual members, beg leave to submit the following preamble and resolutions, to wit: *Whereas*, The profession of medicine is one of the avocations of life recognized by the public and legalized by the commonwealth, a calling which is respected by the community at large and honorable to all who engage in it, the laws of the state and nation recognizing the practice of medicine as a legitimate vocation, and upon the same basis as other businesses, subject alike to penalties and profits, the physician having the same right in charging and collecting his fees as other business men in the community, and is controlled by the same laws, therefore be it —

*Resolved*, That the physicians legally practicing medicine in the county be and are hereby earnestly requested to make a regular schedule of prices for their services in each community or district of the county and that each physician pledge himself to abide by such schedule of prices.

*Resolved*, That this society deprecates any under-charging (for sinister motives) of the regular schedule of fees.

*Resolved*, That the schedule of prices as adopted by the physicians of Murfreesboro are hereby endorsed by this society as being reasonable and

just, and that we recognize them as the established charges of the physicians at Murfreesboro.

W. C. BILBRO, M. D.,  
E. H. JONES, M. D.,  
J. B. MURFREE, SR., M. D.,  
*Committee.*

Physicians present at this meeting were: Drs. V. K. Earthman, A. J. Jamison, E. H. Jones, J. C. Kelton, H. C. Rees, J. B. Murfree, Sr., J. B. Murfree, Jr., S. C. Grigg, W. C. Bilbro, *President*, and Rufus Pitts, *Secretary*.

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**ANEMIA AND ITS RELATION TO CATARRHAL INFLAMMATION.**—No disease is more common than chronic inflammation of the mucous membranes. Doubtless many causes contribute to the prevalence of this malady which spares neither the young nor the old, the rich nor the poor, the high nor the low. Prominent in its etiology, however, are sudden climatic changes, the breathing of bad or dust-laden air, bad hygiene in personal habits, and bad sanitary surroundings. These factors all singly or collectively tend to lower the vitality of the whole human organism, and as a consequence the cells throughout the body perform their various functions imperfectly, or not at all. The quality of the blood becomes very much lowered, with the result that tissues that have important work to perform, do not receive sufficient nourishment and so falter from actual incapacity. The red blood cells are reduced in numbers and the hemoglobin is likewise diminished. Because of the blood poverty the digestive process is arrested, nutritive material is neither digested nor absorbed, and a general state of inanition ensues.

It is not surprising under these circumstances, therefore, that chronic inflammation of the mucous membranes is produced. These highly organized structures with very important duties to perform naturally suffer from insufficient nutritional support, and the phenomena of catarrh follow as a logical result. Perversion and degeneration of the cells in turn takes place, and more or less permanent changes are produced in the identity and function of the tissues.

Appropriate treatment should consist primarily in correcting or eliminating all contributing factors of a bad hygienic or unsanitary character. The individual should be placed under the most favorable conditions possible and every effort made to readjust the personal regime. Local conditions of the nose, throat, the vagina, or any other part, should be made as nearly normal as possible by suitable local applications or necessary operative procedures. Then attention should be directed immediately to improving the quality of the blood and thus increase the general vitality.

For this purpose vigorous tonics and hematics are desirable, and Pepto-Mangan (Gude) will be found especially useful. Through the agency of

this eligible preparation, the blood is rapidly improved, the organs and tissues become properly nourished, and accordingly resume their different functions. Digestion and assimilation are stimulated and restored to normal activity, and the various cells and organs start up just as would a factory after a period of idleness. In fact Pepto-Mangan (Gude) supplies the necessary elements that are needed to establish the harmonious working of the whole organism. When this result is achieved, the catarrhal condition is decreased to a minimum and distressing symptoms are banished, a consummation that is highly gratifying to every afflicted patient, and every earnest practitioner.

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THE PECULIAR VALUE of Fairchild's Essence of Pepsin as an aid in the administration of drugs which are unpleasant to the taste and disturbing to the stomach — the iodides, bromides, mercurials, etc., is well known to physicians; the expedient of giving potassium iodide in junket made from fresh milk with the Essence has become the classical resource in those cases where intolerance of this salt is more than ordinarily pronounced.

*Fairchild's Essence* is also found an admirable vehicle for many other drugs and medicines, such as morphia, tr. nux vomica, Fowler's Solution, quinine; and for the acids — hydrochloric dilute, nitro-hydrochloric dilute, phosphoric dilute, and lactic.

"Tonics" of various kinds gain in agreeability and efficiency when administered in, or in conjunction with, Fairchild's Essence — the syrups of hypophosphites, elixir iron, quinine and strychnia, etc., etc.

Being absolutely innocent and carrying valuable carminative, stomachic properties united with the gastric juice principles, the Essence is of peculiar service in the treatment of the digestive disturbances and bowel troubles of infants and children; and it is most helpful in giving other simple remedies — cough mixtures, syrup of squills, cascara, castor oil, etc.

The unequalled excellence of Fairchild's Essence as a vehicle, an aid to digestion, a practical means of making junket and whey, is due to the fact that it is a *genuine extract of the gastric juice*, presenting in a potent as well as agreeable form all the active principles of that vitally essential secretion.

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OUR READERS will note from the new Antikamnia advertisement which appears in this issue, that the Antikamnia Chemical Co. was prompt to file its Guaranty under the new Pure Food and Drug Act, their Guaranty number being 10; which means that of all the food and drug manufacturers in the United States, only nine filed their Guaranty in Washington before that of the Antikamnia Chemical Company.

This shows the usual Antikamnia disposition to protect the dealer and prescriber of Antikamnia under the law, and gives assurance of the absolute reliability of the Antikamnia preparations.



**SYRUP HYPOPHOSPHITES COMPOUND (FELLOWS).**—This standard and reliable preparation contains the hypophosphorus acid in union with several bases, as iron, lime, and potash, together with the well recognized brain tonics, quinine and strychnine; consequently it is a combination which is indicated in various conditions of the nervous system.

In the phosphites, and still more in the hypophosphites, phosphorus is linked with the bases in combinations easily dissolved; so that therefrom the assimilative organs can easily procure the free phosphorus for the building up of brain food (lecithin).

If the demand which has broken down a healthy brain is continued when that brain is enfeebled, it is clear the latter must break down utterly under the burden. But if the load is lightened while restorative measures are adopted, then the utility of this combination in aiding the system to recover its lost or waning brain-power is unquestionable.

In such conditions, it is quite clear that one great matter is to supply to the organism material out of which this brain pabulum (lecithin) can be readily constructed; and such material is found in the Syrup of Hypophosphites, as is furnished by no other medicinal compound.

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**NEW ORLEANS POLYCLINIC—*Post-Graduate Department of Tulane Medical College.***—The twentieth annual session opens November 5, 1906, and closes May 18, 1907. This school is intended for practitioners only. All instruction aims to be *clinical* and *practical*, and to this end, use will be made of the vast facilities offered at the great Charity Hospital, at the Eye, Ear, Nose, and Throat Hospital, and at the Special Clinics to be held at the Polyclinic.

Physicians in the interior, who, by reason of their isolation, have been deprived of all hospital facilities, will find the Polyclinic an excellent means for posting themselves upon the status of the science of medicine and surgery of the day.

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**THE DISCLOSURE** in the recent past of the fact that many preparations contain opiates or other habit-forming or depressant drugs has no doubt cast suspicion more or less upon all preparations, whether deservedly or not, especially upon those intended for nervous conditions. Neurilla has always been and is now free from "dope" of any kind, and the National Pure Food and Drugs Act should have the effect of reassuring any physician of doubtful mind regarding Neurilla, as we would scarcely guarantee such a statement in the face of the law.—*Dad Chemical Company.*



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"THE DENVER CHEMICAL MFG. CO. is closing the most successful year of its history. *Antiphlogistine* can now be purchased on every continent and in almost every civilized country. For the remarkable growth of the business we are indebted in a great degree to the medical journals which have advertised our product. Their great influence and wide circulation have enabled us to bring *Antiphlogistine* to the attention of practically every physician, with the result that probably ninety per cent. recommend it in their daily work. It becomes a pleasure, therefore, to attest to the value of the journals as mediums of publicity." — *Extract from a letter from Dr. H. S. Baketel, of Denver Chemical Co.*

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**TWENTY-FIVE HUNDRED DOLLAR COUNTRY PRACTICE FOR SALE.**—Eighty-five to ninety per cent. collectable. Competition limited. Location in "Fruit Belt" of West Tennessee. Nice home. Ten to one hundred acre farm. Good people, and but few transients. For full particulars, terms, etc., address, "J. C.," care of the SOUTHERN PRACTITIONER, 208 Sixth Ave., North, Nashville, Tenn.

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**THE PHOSPHATES OF IRON, SODA, LIME, AND POTASH**, dissolved in an excess of phosphoric acid, is a valuable combination to prescribe in nervous exhaustion, general debility, etc. Robinson's Phosphoric Elixir is an elegant solution of these chemicals. (See page 17).

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**A GENERALLY USEFUL ANTISEPTIC.**—Tyree's Antiseptic Powder is one of the most generally useful antiseptic powders for hospital practice or in the office local treatment of leucorrhea arising from various causes, as uterine and vaginal catarrhs, that has ever been introduced. It is valuable as well in gonorrhea, gleet, and such diseases of the mucous passages. It is serviceable also in dysentery, in catarrhal inflammations of the nose, throat, mouth, gums, etc. Dr. W. M. Gray, microscopist to the Army Med-

ical Museum at Washington, D. C., by tests, has proven conclusively its bactericidal action as to the anthrax bacillus, the staphylococci of pus, etc. It combines the qualities of such agents as salicylic and boric acid, so that its application to diseased mucous surfaces has a mild, stimulating and astringent effect in the rapid healing of diseased tissues. While it may be applied as a powder, when circumstances demand, the economy of its use consists in the fact that water (so as to make from ten to fifty per cent. solution) may be added at the time its use may be required. A trial package will be mailed free of charge to physicians if they will send their name and address to Mr. J. S. Tyree, Chemist, Washington, D. C.

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NEWS ITEM.—For the enlargement and betterment of the *Oklahoma Medical-News Journal*, beginning with the January, 1907, issue, the *Oklahoma Medical-News Journal* will have a new editor, Y. E. Colville, B. S., M. D., of Chattanooga, Tenn. Dr. Colville has bought a half interest in the *Journal* and will devote his entire time to the editorial department, while Dr. Phelan will be the business manager. In this way the *Journal* will be greatly benefited and enlarged, and will be a great deal better journal for the profession than heretofore.

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GASTRIC AND INTESTINAL ATONY.—Probably no human ill taxes the patience of medical men more frequently than that given the somewhat generic title, indigestion. A large percentage of the various types encountered, involving both the stomach and intestines, are the immediate result of muscular atony. Insufficient motility of the stomach and intestinal walls diminished blood supply to the mucosa, consequently lessened secretion, and lessened secretion means excessive fermentation of the food ingested.

The problem in such cases—and they are legion—is to restore functional activity of the muscular structures. Herein lies one of the most pronounced properties of Gray's Glycerine Tonic Compound. Under its administration, the muscles of the stomach and intestines resume their normal activity, the glandular structures are stimulated naturally and digestion becomes properly established as a logical result.

This well-known remedy, therefore, does not assume to merely do the work of the sluggish or tired organs; it does more—it *helps them to help themselves*.

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## *Reviews and Book Notices.*

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THE MEDICAL RECORD VISITING LIST FOR 1907.—Wm. Wood & Co., 51 Fifth Ave., New York City, Publishers.

This excellent physician's visiting list and day book is so well and favorably known that it needs no commendation at our hands.

It is published in about a dozen different styles, with varying prices from \$1.25 to \$4.00. It contains the usual important memoranda and data.

"It is not only an economizer of time and trouble in keeping a record of his professional visits and engagements, but may directly *save a large percentage of his accounts*, by enforcing systematic and business-like habits in presenting and collecting the same."

"Wm. Wood & Co. issue their Visiting List in the same style they do all their publications — *excellence and cheapness are marvelously combined in them, and repeatedly evoke praise from the impartial and elicit wonder from their competitors.*"

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THE PHYSICIAN'S VISITING LIST, 1907 (Lindsay and Blakiston's).—P. Blakiston's Son & Co., Publishers, 1012 Walnut Street. Prices, from \$1.00 to \$1.50.

The best and most comprehensive visiting list and pocket account book presented to the medical profession. It is beautifully bound in flexible leather, of a size to fit the pocket. It has columns and pages for all the data the most painstaking doctor could desire. It comprises not only the daily visit list, but a memorandum, address of patients and nurses, obstetric engagements, birth and death record, cash account, etc. Besides these, there is the usual schedule of emergency information contained in all similar publications. Its completeness indicates its age in years and thought of its designer. This is the fifty-sixth year of its publication.

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A TEXT-BOOK OF MATERIA MEDICA: Including Laboratory Exercises in the Histologic and Chemic Examinations of Drugs. For Pharmaceutic and Medical Schools, and for Home Study.—By ROBERT A. HATCHER, Ph. G., M. D., Instructor in Pharmacology in Cornell University Medical School of New York City; and TORALD SOLLMAN, M. D., Assistant Professor in Pharmacology and Materia Medica in the Medical Department of the Western Reserve University of Cleveland. 12mo volume of about 400 pages, illustrated. Price, flexible leather, \$2.50, net. W. B. Saunders & Co., Philadelphia, New York, and London, 1904.

Students of medicine, as well as pharmacy students, will undoubtedly welcome this work. The authors are teachers of much

experience, and in this foregoing book present a work on the subject of materia medica in an entirely new way, teaching by actual experimental demonstration. Part I comprises a guide to the study of crude drugs, both official and unofficial; while in Parts II and III the histologic and chemic examinations of drugs are considered in a scientific, yet clear and simple manner. All the histologic descriptions are supplemented by laboratory exercises of important drugs, so that the student becomes insensibly acquainted with their construction. Throughout the entire work general stress is laid on the recognition of adulterations. We can strongly recommend this work as reliable, practical, and excellent in every way.

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A TEXT-BOOK OF OBSTETRICS.—By BARTON COOKE HIRST, M. D., Professor of Obstetrics in the University of Pennsylvania. Fifth revised edition. Octavo of 915 pages, with 753 illustrations, 39 of them in colors. Cloth, \$5.00, net; half morocco, \$6.00, net. W. B. Saunders Company, Philadelphia and London, 1906.

Immediately on its publication this work took its place as the leading text-book on the subject. Both in this country and in England it is recognized as the most satisfactorily written and clearly illustrated work on obstetrics in the language. The illustrations form one of the features of the book. They are numerous and the most of them are original. In this edition the book has been thoroughly revised. More attention has been given to the diseases of the genital organs associated with or following childbirth. Many of the old illustrations have been replaced by better ones, and there have been added a number entirely new. The work treats the subject from a clinical standpoint.

The following authoritative *Press* opinions we can most heartily endorse:—

“The popularity of American text-books in this country is one of the features of recent years. The popularity is probably chiefly due to the great superiority of their illustrations over those of the English text-books. The illustrations in Dr. Hirst’s volume are far more numerous and far better executed, and therefore more

instructive, than those commonly found in the works of writers on obstetrics in our own country."—*British Medical Journal*

"The work is an admirable one in every sense of the word, concisely but comprehensively written."—*Bulletin of Johns Hopkins Hospital*.

"The illustrations are numerous and are works of art, many of them appearing for the first time. The author's style, though condensed, is singularly clear, so that it is never necessary to re-read a sentence in order to grasp the meaning. As a true model of what a modern text-book on obstetrics should be, we feel justified in affirming that Dr. Hirst's book is without a rival."—*The Medical Record, New York*.

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ATLAS AND TEXT-BOOK OF HUMAN ANATOMY, Vol. I.—By PROFESSOR J. SOBotta, of Wurzburg. Edited, with additions, by J. PLAYFAIR McMURRICH, A. M., Ph. D., Professor of Anatomy at the University of Michigan, Ann Arbor. Quarto volume of 258 pages, containing 320 illustrations, mostly all in colors. Cloth, \$6.00, net; half morocco, \$7.00, net. W. B. Saunders Company, Philadelphia and London, 1906.

In no department of medicine and surgery have the disciples of Gutenberg and Faust aided so much as in the fundamental one anatomy. When one comes to compare the anatomical works of to-day with those of half a century ago, he can but be astonished and marvel at the greater facilities afforded outside the nauseating and noxious atmosphere of the dissecting room. This splendid Atlas, with its wealth of accurate illustrations and its thorough though concise text will prove of the greatest value to students and practitioners.

This volume, confined to Bones, Ligaments, Joints, and Muscles, is especially adapted for use during dissection, and while actual work over the cadaver is absolutely essential, this work will greatly aid and facilitate that, as well as proving of additional value for refreshing the memory and fixing in the mind's grasp the observations and studies in the dissecting room.

The splendid half-tone plates, the thirty multi-color, and four in the so-called three-color process in the section on myology are marvelous in their clearness and accuracy. No illustration has been omitted which would make the relation of the parts more

easily understood. For ready reference by the general practitioner, and for the student in preparing for his examinations the work will prove of more than ordinary value.

In order to insure accuracy of the illustrations, all of the preparations were photographed and the photo was made exactly the same size as the intended illustration, lenses of the longest possible focal length being employed to avoid perspective distortion; and in a few instances where it was thought there would be a possibility of distortion even with this precaution, the subject was photographed to one half the size of the desired illustration, and the photo was then subsequently enlarged. The publishers have spared nothing to make the illustrations excel all other works of this class, yet the price is remarkably moderate.

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ABDOMINAL OPERATIONS.—By B. G. A. MOYNIHAN, M. S. (London), F.R.C.S., Senior Assistant Surgeon at Leeds General Infirmary, England. Second revised edition, greatly enlarged. Octavo of 815 pages, with 305 original illustrations. Cloth, \$7.00, net; half morocco, \$8.00, net. W. B. Saunders Company, Philadelphia and London, 1906.

In this magnificent work, only those operations common to both sexes are considered, no gynecological operations being described; furthermore, the surgery of the kidneys and bladder, both partly extra- and intra-peritoneal, and the various hernia operations are not included. The operations described are those in general use, and all, or nearly all, are those practiced by the author.

It has been said of Mr. Moynihan that in describing details of operations he is at his best. This, his latest work, gives in most exact language not only the actual *modus operandi* of the various abdominal operations, but also the technic of preliminary preparation and sterilization. Dr. Edward Martin, of the University of Pennsylvania, says: "It is a wonderfully good book. He has achieved complete success in illustrating, both by words and pictures, the best technic of the abdominal operations now commonly performed." Complications and sequelæ and after-treatment are presented in the same clear-cut style as the operations themselves. The beautiful illustrations were drawn under

the author's personal supervision, and serve extremely well, indeed, to illustrate the various steps in the operations described.

Although only a very short time has elapsed since the first edition of this work was published, the author has found it necessary to make a large number of additions to the text and to the illustrations; some revision he has also found desirable, and has entirely rewritten two of the chapters.

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## *Selections.*

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A CASE OF AN INFANT MENSTRUATING FROM DATE OF BIRTH.—The first child of healthy, young white parents was born at their country home in Wythe county, July 14, 1905. On the 18th of the same month, I was called to see the child, and found undoubted menstruation. Its breasts were enlarged, congested, and tender, and a milky fluid oozed from the nipples.

The menstrual flow continued for three days, at the end of that time the congestion left the breasts, but they have remained unusually developed.

The flow has reappeared each month, with no perceptible effect upon the child; she appearing perfectly normal and healthy in all other respects.

I find two kindred cases mentioned in Vol. I of "Medical and Surgical Gynecology" (Pozzi) as follows: "Campbell has recorded an excessive development of the generative organs in a child of four years, who had regularly menstruated every three weeks since birth." Prochownick had the opportunity of performing an autopsy upon a little girl of three years, who had begun to menstruate at one year, and found upon the ovaries all the signs of both old and recent ovulation.—*W. H. Ribble, Jr., M. D., in Virginia Medical Semi-Monthly.*

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TREATMENT OF RHEUMATOID ARTHRITIS.—For local applications, hot baths, moist or dry heat, and especially the baking apparatus, especially with the larger joints, have been very efficacious. To rub the joints, a cream of menthol, five per cent., and ten per

cent. wintergreen with a non-greasy base (Huxley's formula), and hydropathic treatment may be used. The Faradic current may be applied to the atrophied muscles, and the galvanic to the joints. Electric baths in some cases seem to be useful. Cases with local causes of infection, such as leucorrhea, should receive proper attention, and the cause removed as speedily as possible. In these, tonic remedies, such as arsenic and iron should be employed, as well as local treatment by douching and astringent injections, etc.—*International Therapeutics, October, 1906.*

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DR. BERNARDO NOBO, of Liberia, Costa Rica, finds the combination of glycerophosphate of quinine with the benzoates of creosote and eucalyptol, known as "Kugloids," especially suitable to the treatment of chronic bronchitis and in the early stages of tuberculosis, so prevalent in this tropical country.—*International Therapeutics, October, 1906.*

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AS A MUSCULAR TONIC:—

℞ Syrup. acid. glycerophosphatis comp. (Huxley) ʒ viii  
 Tr. nucis vom. . . . . ʒ ii  
 Sodii formatis . . . . . ʒ ii  
 Ferri formatis . . . . . ʒ i

M. Ft. Sol. Sig. One teaspoonful in a wineglass of water immediately before or with meals.—*H. Silvester, International Therapeutics, October, 1906.*

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METHYL SALICYLATE AS A LOCAL APPLICATION.—Dr. Edmund Rottenbiller (Austria-Hungary) reports in *Klin. Therap. Wochensch.* on the use of this agent in one hundred and twenty-two cases of acute rheumatism. He made use of the natural oil of the wintergreen, and none of the disagreeable symptoms which usually follow the administration of the salicylates were noted. It is said to be useful in the treatment of orchitis.

The synthetical oil of wintergreen is a favorite in this country in rheumatic affections, but more frequently betul-ol, derived from natural wintergreen or sweet birch, is preferred to the artificial salicylate, because it is non-irritating, analgesic, and very rapidly absorbed by the skin.—*International Therapeutics, October, 1906.*



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EDITOR AND PROPRIETOR

VOL. XXIX.

NASHVILLE, FEBRUARY, 1907.

No. 2

### *Original Communications.*

GASTRO-ENTEROSTOMY FOR DUODENAL ULCER;  
INTERVAL APPENDICITIS; APPENDIX ABSCESS;  
HERNIA; COLOSTOMY FOR SARCOMA OF RECTUM.\*

BY WILLIAM D. HAGGARD, M. D., PROFESSOR OF GYNECOLOGY IN THE  
UNIVERSITY OF TENNESSEE, NASHVILLE, TENNESSEE.

*Gentlemen:* While the first patient is taking the anesthetic I wish to show you this man who was operated upon a week ago to-day. He had a posterior gastro-enterostomy for a duodenal ulcer, and, as you see, has made a very pleasing recovery. We propped him up in bed the day after the operation and he has not vomited a single time since. He says he has vomited certainly

\* A Clinical Lecture Delivered at St. Thomas Hospital, January 2, 1907.

a thousand times in the last year. Before the operation he vomited from two to four times a day, usually, and frequently much oftener in severe spells. Although he has been taking liquids from the day of operation, and for two days past semi-solid diet, he has had none of his old trouble whatever. I have had him up in a rolling chair to come before you in order that those of you who witnessed the operation might see how beautifully he has progressed. He has had absolutely no elevation of temperature and his pulse rate has not been above 90. I think his post-operative recovery has been all that we could ask. The following is his history:—

Age 32, married two years, family history good. Weight now 114 pounds, usual weight 145. He has had indigestion six or seven years. There was considerable pain after eating certain articles of diet. He has always been very much constipated. Had first hemorrhage from stomach July 15, 1906, second spell passed large quantities of blood from bowels, also another copious hemorrhage on the 21st. Pain in the epigastrium has been the most conspicuous symptom. It would come on from two to four hours after eating, and frequently at twelve o'clock at night. Vomiting would relieve but would frequently recur. He has vomited contents of stomach twelve hours after ingestion. Emesis seemed to relieve but was more or less painful and very disagreeable. He would have no ease after eating until he would vomit. There is no sore spot on pressure. He has vomited from one to four times daily for the last twelve months. There has never been any fever. He has taken pepsin mixtures, charcoal tablets, all the dyspeptic remedies he could hear of, and lavage for a number of weeks. Castor oil, one-half ounce, was taken every night for five months before the hemorrhage of July 15. He has had eleven physicians, but ulcer was diagnosed but twice. He was referred to me for operation by Dr. O. J. Porter, of Columbia, Tenn.

I wish particularly to call your attention to the fact that he has had chronic indigestion for five or six years. The most conspicuous symptom was pain after eating, usually about four hours after eating, and frequently at midnight. This pain always

provoked vomiting, which usually gave relief. Moreover, he frequently had pain just before eating, and when he would nibble a biscuit or take food the pain would be relieved. This is a very important sign of duodenal ulcer. The pain, you will observe, before eating is due to the acid gastric juice escaping through the pylorus and irritating the duodenal ulcer. As soon as food is taken the pylorus involuntarily closes in order for digestion to take place in the stomach and the acid no longer escapes over the raw surface of the ulcer. At the completion of digestion, however, or in about four hours, when the chymified contents of the stomach are delivered into the duodenum the pain then becomes severe again and vomiting ensues. Frequently a considerable quantity of the meal previously taken is left in the stomach and vomited at the end of twelve hours, showing that there is an obstruction to its free exit. At the end of four or five hours it should all have passed out of the stomach. In this connection, I especially desire to direct your attention to the pain after midnight, which is always characteristic of duodenal ulcer. These pains have been rather constant in his case, varying in intensity from day to day. You recall that he had a very severe hemorrhage six months ago, and also passed a large quantity of partly digested blood by the bowels. He had a repetition of this hemorrhage. You must remember that hemorrhage is not a constant symptom. He has lost over twenty pounds.

Inflation of the stomach by tube and Davidson syringe shows it to be considerably dilated, extending about three fingers below the umbilicus. The test meal withdrawn at the same sitting showed an excess of free HCL. We here have all the classical symptoms of ulcer: pain, hemorrhage, vomiting, emaciation, dilatation of the stomach, and free HCL. There was no appreciable tenderness over the abdomen, although the two attacks of appendicitis which he speaks of having may have been a localized peritonitis around the ulcer. There was no point of tenderness discovered along the spine as there frequently is in ulcer of the stomach.

The operation revealed a chronic indurated ulcer of the duodenum immediately adjacent to the pylorus. Grasped between

the fingers it felt as large as a pullet's egg. There were some adhesions about it, although there was no evidence of chronic perforation with a mat of adhesions.

The operation consisted of sewing the jejunum to the posterior wall of the stomach at a point on the jejunum about two and one half inches from the duodeno-jejunal angle, and at a point on the stomach at its lower border and near its right extremity, just where the jejunum normally lies against the stomach, with only the meso-colon intervening. This was opened and the posterior wall of the stomach pushed through and caught in a stomach clamp, and the jejunum was also clasped in a forceps, and as they lay parallel they were united by two rows of sutures which made an anastomotic circle of communication two inches in length after the two folds were incised. This constitutes the "no loop" operation, which has done away with the so-called "vicious circle," which made the post-operative vomiting such a fatal source of danger where long loops of intestines were attached to the stomach. The idea is to allow the food current to go through the new opening into the intestine from the stomach, instead of attempting to pass the obstructed pylorus. Food will more readily pass through the new opening rather than the normal on account of the inflammatory exudate at the pylorus from the ulcer immediately below it. In this way we give the ulcer complete rest and thus allow it to heal spontaneously.

I do not know of a more brilliant operation in surgery than this in appropriate cases, and I cannot conceive of a more perfect adaptation of the method than has been illustrated in this particular instance.

There are many cases of chronic indigestion that are due to ulcers of the stomach and duodenum that are not recognized, but simply treated for indigestion and dyspepsia. The results, of course, are very disappointing, as evidenced in the long story of ineffectual cure in this instance. A proper understanding of the natural history of ulcer that causes indigestion, not of nervous origin, would enable us to relieve a large number of cases of otherwise hopeless suffering. The operation must be applied to cases which have undergone cicatrization of the ulcer, and preferably

in cases where there is an obstruction to the pylorus. These cases furnish most certain and positive results.

The lesson to be derived from this case is to be suspicious of ulcer in long-standing cases of painful digestion. The corroborative information furnished by a test meal and the stomach tube is very simply obtained, consisting only of distending the stomach with air to determine whether or not it is dilated, and withdrawal of the test breakfast of tea and toast administered an hour before, will enable you to determine whether or not HCl. is in excess. I do not think there is any difficulty in diagnosing typical cases; but in cases without obstruction, and especially if the ulcer is in the duodenum and has had a sub-acute perforation with adhesions, it is difficult to discriminate the lesions from gall bladder disease. Fortunately this is not essential, nor is it possible always to say which trouble exists; but if the symptoms are unrelieved by ordinary means and one can narrow the disease down to stomach or duodenum on the one hand, and gall bladder on the other, operation is justified, because the condition is purely surgical and incision is the first step not only in the determination of the pathology, but a necessary one in its cure.

I wish to caution you against the neurasthenic whose stomach symptoms may simulate ulcer, but unless there is absolute proof of mechanical interference or bleeding, operation is absolutely contraindicated.

*Note.*—This patient left the hospital in seventeen days, having gained ten and one half pounds, and did not vomit a single time and was able to take solid food without discomfort.

#### INTERVAL. APPENDICITIS.

The case which is now ready for operation is a civil engineer twenty-four years of age, who has recently recovered from a very severe attack of cramp-like colic which was so severe that it required a grain of morphine hypodermatically within two hours to give him relief. He was under the care of Dr. E. M. Sanders, my associate. There was no rise of temperature at this time, but the next morning there was a slight rise, and by afternoon there was distinct tenderness over the appendix. He was con-

fined to bed three days. He had not had much tenderness hitherto in his many spells — eight in the last eighteen months — but the history of so many attacks of colicky pain, although beginning as is usual in the epigastrium and finally localizing itself over the appendix, made it fairly certain that all of his spells were of appendicular origin. None of them, however, were very severe so far as infection went, except the first one. At that time he evidently had a considerably localized peritonitis, keeping him in bed ten days, which led to the diagnosis of appendicitis by Dr. Runyon of Clarksville; but in the subsequent attacks, on account of absence of tenderness and rigidity over the appendix, and not being attended with temperature, it was supposed his attacks were of gall bladder origin. As against that, his age of twenty-four would almost negate gall stones. Two weeks have elapsed since his last attack, and he may be said to be “in the interval.”

I will now make the McBurney incision through the skin, superficial fat, and fascia of the external oblique muscle of the abdomen, which brings us down to the muscular fibers of the internal oblique, which we separate at right angles to the incision through the aponeurosis without division of the muscle fibers.

We now take up the peritoneum with two forceps and see the black rubber glove shining through the two folds, which tells us there is no other viscera grasped by the forceps. This is now nicked and gently pulled apart, allowing us to come down with the examining finger to the cæcum. I now pull this out and you see developed the base of the appendix very distinctly covered with adhesions. I am not able to deliver this freely because it is plastered against the outer side of the cæcum; but I will, however, take hold of its tip by the forceps and divide the adhesions by sharp dissection. The adhesion to the cæcum is too dense to separate otherwise. At this point, midway of the appendix, I will now ligate on both sides with catgut to the base of the appendix, and another ligature surrounds the meso-appendix and allows us to hold it up vertically, clamp it at its base and with another clamp above we will amputate it. I will not put the purse string of linen about the base of the appendix as usual, because the cæcum is so friable, but will crush the stump with this heavy

Ferguson clamp and ligate in the groove thus made with a double strand of linen and cauterize the stump with a forceps dipped in carbolic acid. A pad of gauze wrung out of alcohol neutralizes the acid and it is perfectly safe to treat the stump in this way. I usually employ the purse string suture and invaginate the stump. It is neater and more surgical looking, but in cases where suturing is not easily employed, or where time is an element, the simple ligation is entirely trustworthy. In the presence of pus, catgut is better than linen or silk, as these latter sometimes become infected, and as a foreign body keeps up a sinus for weeks until the loop is finally discharged. A careful survey has been made to make sure there is no bleeding, and the viscera are returned to the abdomen gently and the peritoneum closed by catgut. The muscles fall together, and a double suture of number two catgut applied as a continuous suture closes the aponeurosis. The skin is now closed with a lock-stitch of horse hair and dressings will be applied. The operation, as you see, has only comprised a few minutes — fourteen — and he ought to make an uneventful recovery.

#### APPENDICULAR ABSCESS.

While the dressings are being applied and before the next case is anesthetized I wish to show you this patient in the rolling chair who was operated on three weeks ago for an enormous appendicular abscess. He gave the following history:—

Age 24 years, married, two children. Had typhoid fever eight years ago. He was taken Monday, November 26, with violent colic in the epigastrium. At dinner the smell of food deprived him of appetite. In the afternoon he was compelled to go to bed with cramp-like pain, which lasted him all the afternoon and night, during which time he vomited frequently. Tuesday he could not move his right leg. The colic left, but the tenderness and soreness in the right iliac region persisted and caused great pain when riding home on the train. Sunday night he was worse and could not touch the side and had considerable fever. Monday, a week after he was taken, he consulted a physician, who diagnosed appendicitis with a mass in the right side, and advised operation

after the attack had subsided. The patient was given calomel, which acted, and the side was painted with iodine. On Wednesday he grew considerably worse and was seen by Dr. Anderton of Winchester, who advised operation, which was declined. Saturday night he was brought to the city and operated on Sunday morning, the fourteenth day after his illness began. He had 102° temperature and pulse 120. The right iliac fossa was occupied by a visibly prominent tumefaction as large as a saucer. It was tender, quite hard and brawny, and dull upon piano-note percussion. It was a typical peri-typhlitic abscess of our forefathers, to whom the real appendix pathology had not become revealed. When I incised it, over a pint of ill-smelling pus escaped, in which was found the appendix sloughed off, which washed out in the pus. A drainage tube of rubber was inserted and one suture put in the one-and-one-half-inch incision. On the third day a fecal fistula appeared, and the man was quite sick for a week with high temperature and delirium. He has made a slow recovery. The fecal fistula has about healed, but he will be in the hospital altogether between four and five weeks.

It is a rather general belief among practitioners that the appendix nearly always sloughs off when an abscess forms, but I am sure that this is not true. I have opened perhaps two score of these huge abscesses, and this is the first time I have seen the appendix wash out of the incision. Dr. Bevan, of Chicago, who happened to be in the hospital when I finished the operation, and to whom I showed the specimen, said he did not remember to have seen a case.

The fecal fistula presumably came from the base of the cæcum from which the appendix sloughed, but you must bear in mind that a rubber drainage tube can cause a fistula from pressure. Fortunately, however, most fecal fistulæ heal spontaneously. I have seen quite a dozen from various causes reach this happy conclusion. Of course it is the inherent tendency to heal which does it, but this is so uniform that it almost seems that there is something in the discharge that stimulates repair. Don't ever worry about a fecal fistula. Let it alone. Treat it as simply as possible. If one should occasionally persist for a number of months it is then



time enough to consider its repair. This is always a formidable undertaking. Attempts at plastic repair at the skin opening usually fail. It generally requires a resection, or an anastomosis. Simple suturing must be preceded by a thorough immobilizing of the bowel. In reference to the abscess cases, you must know that nothing is safer or simpler in surgery than their evacuation and drainage. They nearly all get well that are operated on the tenth or fourteenth day. I have never lost one of these cases. Nature has already practically accomplished their cure by walling the infected area off, generally into the lower quadrant of the abdomen. I have seen them centrally placed, and once or twice in the left side. If it is in the iliac fossa, place the incision near the anterior spine. If it bulges into the loin, incise posteriorly. Never search for the appendix. Usually it is buried in the defensive wall of exudate. Of course if it is easily felt or seen it may be removed with care, but it is dangerous to meddle with the adhesive barrier. It gives no further trouble in about seventy-five per cent. of the cases. In the remaining fourth there are other attacks, continued discomfort, and occasionally a persistent sinus. The appendix should be removed subsequently from this group, but all should be watched and cautioned. The persistent sinus cases are the most dangerous for re-operation, because of the presence of infection. In secondary operation the appendix is usually near the site of incision. The mucosa of the appendix is the last place to heal, and is often drawn quite to the opening of the sinus. I have seen it a year after an abscess operation, hanging to the abdominal wall near the site of the incision, and every vestige of the other adhesions had disappeared. In all abscess cases wait until the tenth or fourteenth day before operation. The dangerous period for operation in all appendicitis cases is from the third to the seventh day. All suspected cases presenting abdominal pain, right-sided rigidity and tenderness, with or without vomiting and temperature, are best operated on in the first forty-eight hours, if possible. If for any reason this is not done, I am convinced that in the majority of cases the so-called Ochsner treatment of absolute abstinence from food and cathartics, and rectal alimentation, offers the best results in that

stage. If an abscess results, the treatment is illustrated in this case. If resolution occurs, operation should be done after the attack subsides, usually before the patient leaves the hospital, especially if he has had other attacks previously.

#### VENTRAL HERNIA.

This patient whose abdomen is being prepared and under ether is thirty-eight years of age. She is a very fleshy woman, and I operated on her two and one half years ago, removing a right-sided pyo-salpinx and an adherent appendix, and sutured the round ligaments to the fascia of the parietes after the method of Ferguson. She now has a post-operative hernia through the original incision. This is the third hernia that I know of in my last one hundred and fifty sections. All occurred in very stout women. One of these, curiously enough, occurred after an operation to cure a ventral hernia. There was no active suppuration, but a weeping of thin, straw-colored fluid through the drainage opening in the lower angle of the wound, which persisted for two or two and one half weeks. The third was in a perforated appendix case with drainage, in a short fat woman.

The case before you healed aseptically, but she had had a chronic bronchitis that was lighted up by the anesthetic, and in a fit of coughing on the third day she said she felt something give way. The hernia did not become apparent for several weeks, and she has deferred operation these two and one half years, until now the protruding mass is as large as a coca-nut when she stands without a supporter. It gives her considerable trouble.

You see the over-stretched, wrinkled appearance of the skin. It is very thin and nothing else save an investment of peritoneum covers the viscera. They are apparently not adherent. The margins of the muscles and fascia can be felt as a gaping ring. I raise the skin vertically between forceps at its thinnest point, and feeling nothing intervening I incise it and examine the interior of the sac. There are no adhesions and I lay it open from end to end. Here are the round ligaments on both retracted sides, holding the uterus in good position. This is a beautiful illustration of the efficiency and mechanism of this operation for

retroversion. This patient had an attack of severe colicky pain, followed by jaundice, for three or four days while convalescing from her other operation, and I felt conscience-stricken that I had not examined the gall bladder as I nearly always do. I will examine it now for gall stones, although she has not had another attack. It is soft and yielding, normal in size, has no adhesions, and contains no stones. I will slip my finger in the foramen of Winslow and palpate the common duct. I can feel no stone. She may have passed one at the time, or she may not have had a calculus at all.

The main thing in ventral hernia is to liberate the retracted fascia from the scar margin above and the muscles underneath. In order to do this I am stripping the fat back on either side very extensively; but there must be no tension, or no more than is normal, and even that having been negative so long seems too much, now that I try to approximate the fascia. I will unite the peritoneum and muscle separately with catgut and bring the fascia together with chromic catgut No. 3, in continuous suture. The fat in these cases contraindicates through-and-through sutures, and I will reinforce this fascia by a few interrupted sutures of Pagenstacker linen. The fat is best not sutured and I will bring the skin together with horse hair. Before that I will make a stab-wound on either side through the skin and as far out as I have detached the fat from the fascia, and through these openings I put a cigarette drain to provide for the escape of fluid from this rather extensive separation of tissues. This is quite important in this case.

The dressing will be supported by wide bands of adhesive plaster, and the lateral drains left undisturbed for five or six days.

#### COLOSTOMY FOR SARCOMA OF RECTUM.

Two days ago I operated on this young man, making an artificial anus in the inguinal region. It is a most remarkable case. He is only twenty-three years of age and has an enormous sarcoma extending from the internal sphincter to the junction with the sigmoid. He noticed blood for the first time six months ago.

He has, however, been obstinately constipated for two or three years. It has lately become exaggerated, and for the last five weeks the bowels have only moved through a rectal tube after an enema. He has not suffered greatly and has not lost over fifteen pounds. The anus gaps wide open and an inch within the rectum is filled with a nodular induration which obstructs farther insertion. A napkin was worn on account of the bloody mucous discharge. I felt fairly certain that the growth was malignant. He denies lues and it was too nodular and hard for tuberculosis.

The growth was too massive for removal by the sacral route, and I hoped to do the combined operation, dividing the sigmoid above, freeing the upper rectum from its attachments, making an artificial anus, and then removing the entire rectum from below. When he came in for operation he was running a temperature of 100° and had a pulse of 120. On the second day he had visible peristalsis and colicky pains that the rectal tube failed to relieve. It was apparent that he was getting toxemia from chronic obstruction, and I thereupon decided to do at least a preliminary colostomy. On making a left-sided McBurney incision and examining the growth from within the abdomen, I was surprised to find it as large as one's fist and inoperable. I brought up the sigmoid through the incision, and turning down a skin flap one-and-one-half inches wide parallel with the incision, I brought the upper end of the bowel underneath this skin flap before sewing it back in position after the method of Mixter. This skin flap is between the two limbs of the sigmoid. As I take the rubber tissue off, you see the loop of the sigmoid lying outside of the abdomen. The adhesions will be competent by to-morrow and I will sever the bowel above the skin flap, which, as you see, passes between the limbs of the eviscerated intestine as the glass rod used by some does. After severance, the lower end falls into disuse, and the upper end protruding through the McBurney grid-iron incision is given a good muscular control as it emerges through and is grasped by the separated muscle fibers of the internal oblique. It then tunnels under the flap of skin that was raised. The patient is in good condition, considering that he has a temporary obstruction. I will open this sooner than usual on

that account. I could do it now or at the operation, but it is safer to wait for adhesions if possible.

*Note.*—The sigmoid was opened on the third day, and the patient improved temporarily, but died on the ninth day from exhaustion. The microscope showed sarcoma.

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### ITEMS OF INTEREST.

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BY E. S. MCKEE, M. D., OF CINCINNATI, OHIO.

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*Cæsarean Section in a Child of Thirteen.*—Boldt (*Monatschrift für geburtshuelfe u gynekologie*, May, 1906) reports a case which fortunately is of very rare occurrence. He was consulted about a child twelve years of age in the fifth month of pregnancy. The pelvis was generally contracted, the conjugate two and one half inches. There was some objection to the production of abortion. Term was expected in the third week of August 1905. August 9 the child was taken into the hospital. Dr. Boldt expecting to perform the operation Aug. 12. The urine was found to be albuminous with hyaline casts. On the tenth, violent convulsions set in with very acute edema of the lung, and within one hour and a half of the first fit Dr. Boldt operated, opening the uterus and extracting the child and placenta exactly two minutes after the abdominal incision had been commenced. The patient was sent back to her bed twenty-nine minutes after the Cæsarean section. Primary relief from the symptoms was almost instantaneous, but unfortunately the fits and the edema of the lungs recurred within a few hours, and the patient died within fourteen hours after the operation. She was twelve years and eight months old. The infant lived. The necropsy showed much pericardial effusion and the lungs were edematous with pleural adhesions on the right side. The kidneys showed all the signs of an acute parenchymatous nephritis; the ureters were much dilated. The urine passed after the first convulsion was full of casts and solidified on boiling. The nature of acute nephritis in this pregnant child is instructive in respect

to the question of nephritis in pregnancy and the relation of all the forms of nephritis to puerperal eclampsia.

*The Address in Obstetrics* before the British Medical Association at Toronto was delivered by Dr. Walter Griffith. He gave considerable attention to the teaching of obstetrics. He urged that to put this on the proper basis it is first essential that the clinical teaching be given in hospitals provided for that purpose. Lying-in-wards in a general hospital would do if there were enough beds to insure a continuous stream of cases. He is convinced that it is the greatest advantage to students that they be taught their duties at the same time and place as midwives and monthly nurses. The advantages appear to be that the students learn some of the details of nursing and the nurses learn how much more the doctors know than they do. There is at least one hospital in London in which the students are instructed in the more common details of nursing, and if Dr. Griffith's address leads to the more common adoption of this method it will do good. He holds that the teacher of obstetrics should be the person actually in charge of the lying-in-ward externe maternity department, which would cause the teaching to devolve on the younger members of the staff. Teachers of midwifery have been looked down upon, partly because labor is generally a natural process, partly because many lecturers on obstetrics have had very little practical experience, while others have had much experience but little scientific training.

*The Life and Work of Matthew Duncan* was a part of this very interesting address. Looking back to Duncan and his contemporaries, the only one with whom a comparison can be drawn is his great teacher, predecessor and colleague, Sir James Y. Simpson. Duncan began his professional career without the advantage, or disadvantage, of inherited wealth. The accident which directed his ability to his life work was that when he was newly qualified and looking for something to do Simpson was looking for an assistant in his private practice. A common friend sent Duncan to him and he became first his assistant, afterward his rival in practice. He was the only one of Simp-

son's assistants who started to practice in Edinburgh. Duncan was a man of the academic type. He would think and write with the greatest precision. Duncan at London raised obstetrics to a position it had never before attained.

Matthews Duncan's removal to London was a loss to the Edinburgh school of medicine of a robust, masterful, and inspiring personality. His advent into London raised obstetric teaching all around. As Dr. Griffith says: By his teaching and example he transformed the teaching of obstetrics and gynecology from an almost insignificant position to one of the greatest importance. . . . This transformation was due not only to his learning and greatness as a teacher, but also to the greatness of his character, which made it impossible for any one to be brought into contact with him either in hospital or palace, without feeling that the branch of the profession which he practiced was as noble and dignified as that practiced by the noblest physicians and surgeons. Duncan often expressed to his colleagues and pupils his admiration for the work of Braxton Hicks. Let us compare Duncan with his teacher and rival Sir James Y. Simpson. His work was of a higher character than that of Simpson, although in variety and originality he may have been overtopped by his great master. Simpson was a man of inexhaustible energy, of intense vitality, restless activity, versatile, many sided; capable of scientific work of the highest order, but often in too much of a hurry to finish off this work as it should have been done. Essentially a man of the world, a man of business, but nevertheless a great man. Duncan, as stated, was the only one of Simpson's assistants who started in practice in Edinburgh. The others who became eminent, Storer, Priestly, Black, never put themselves in the field against Simpson. One consequence was a sort of a personal antagonism between Simpson and Duncan. . . . There was not only the usual clashing of material interests but opposition in mental characteristics. The writer being a former student of Matthews Duncan at St. Bartholomew's Hospital feels a sort of a personal satisfaction at hearing the memory of Matthews Duncan honored from such an honorable source.

*Salt Baths in Gynecology.*—Andre Clarisse (*La Clinique*) recommends baths of chloride of sodium in certain gynecological affections with special reference to the springs and sea water of Biarritz. He finds that cases of metritis and salpingitis coming under observation as they generally do at Biarritz, in a subacute and chronic stage characterized by profuse menorrhagia inducing anemia, or by a certain degree of enlargement and adhesion of the pelvic contents are greatly benefited by sodium chloride baths. The infection is weakened, inflammatory manifestations improve, pain and tenderness diminish, the periodical hemorrhage becomes normal, the adhesions relax, and conception is again rendered possible. In uterine fibromata he recommends the baths either by themselves or in cases approaching the menopause, or, as an ante cure or post cure if operation is found necessary. Their influence on the vascular system has been utilized in the treatment of varicose veins, either at the close of the acute stage of phlebitis, or as a disinfectant and stimulant in varicose ulcers.

*Avoidance of Ruptured Perineum.*—Rudeaux (*La Clinique*) emphasizes the wisdom of disengaging one parietal protuberance after the other from the orifice of the vulva, and making sure that the occiput is completely free from the pubic arch before allowing the head to extend so as to deliver the face. The necessity of suitable pauses during the expulsive process, so as to profit by the elasticity of the maternal tissues is insisted on; and in the cases of instrumental delivery, restraining rather than making traction when the suboccipetal region has passed under the pubes.

*Embryotomy in the Living Fetus.*—Budin (*Progress medicale*) reports a case from the *Clinique Tarnier* in which repeated applications of the forceps failed to deliver, and the patient's condition was such as to contraindicate Cæsarean section or symphesiectomy. He cited various authorities as justifying him in having recourse to cephalotripsy, although the fetal heart sounds were still audible. He closed by asking the students to ask their own consciences what they would do were the patient their own wife, sister, or daughter.



*One Child Sterility.*—Mathews (*Surgery, Gynecology, and Obstetrics*) among one thousand gynecological dispensary cases found eighty-two instances of one child sterility in which the pregnancy terminated during the first two years of marriage and no conception took place during the next three or more years. Among this number there were only seventy-five cases of absolute sterility. In one hundred consecutive gynecological cases in private practice there were eighteen women sterile after three years of married life, and fifteen sterile three or more years after one pregnancy. It may be assumed in these cases that the sterility is due to some condition in the female rather than in the male, and that the condition is not congenital. Mathews is inclined to lay the blame in the majority of instances to gonorrhea, which may supervene about the same time as the pregnancy, and spreads under the conditions rapidly to the tubes. Even puerperal sepsis seems inclined to bring about sterility. Retroversion, flexion, and subinvolution furnish another small percentage of cases, but the frequency of gonorrhea shows that in recommending treatment this must be borne in mind. Mathews says that it is foolish to dilate the cervix and curette the uterus when the history points to occluded tubes. More care than ever should be given the pregnant woman if gonorrhea ensues, and as this can hardly be eradicated during pregnancy itself, the treatment should be continued for some time after.

*The Vomiting of Pregnancy.*—J. Whitridge Williams (*Bulletin of the Johns Hopkins Hospital*) differentiates three distinct types of the disorder, namely, reflex, neurotic, and toxemic, in accordance with the varying etiological factors present in the individual case. Reflex vomiting of pregnancy results from disorders of the generative tract precedent to or coincident with pregnancy, such as abnormalities of the uterus, displacements, endometritis, ovarian tumors; and abnormalities of the ovum, such as hydramnios, hydatidiform mole, or twin pregnancy. The treatment consists in removing the underlying disturbance and in the presence of hydramnios or hydatidiform mole the pregnancy should be promptly terminated. The neurotic variety is found to respond most readily to suggestive and supportive treatment.

*Mitral Stenosis and Pregnancy* was the subject discussed at a recent meeting of the Medico-Chirurgical Society of London, Drs. French and Hicks found that when heart failure developed it was not with the first pregnancy, but often only after several. The treatment was not to be modified by the pregnancy. It was not right to forbid marriage to all women who have mitral stenosis. Such a person, whether married or single, was not likely to reach old age. After twenty, with good compensation, pregnancy was not as apt to accelerate heart failure as recent text books stated.

Sir Dyce Duckworth thought marriage unwise. The probability of early break down was greater in the poor. The plethora of pregnancy threw an extra strain upon the heart. Dr. Herman thought the danger had been exaggerated. With good compensation there was but slight risk, and that about the seventh month. A subsequent speaker advocated rapid delivery, forceps and chloroform, in threatening cases; another held that compensation might in some cases be increased through stenosis. Dr. Poynter appealed to statistics to prove that the frequency of heart disease from rheumatism was the same in the two sexes. He thought that perhaps in pregnancy there was an increase. Dr. Bonney mentioned three cases of malignant endocarditis, occurring in puerperal sepsis, and a fourth in which a pregnant woman was attacked. Dr. W. S. Griffith said that delivery might be accomplished in severe cases of stenosis and yet death occur during the puerperium, though the risk there had been exaggerated. In 4,171 recent deliveries in hospital there were 28 cases of heart disease. Of these 2 were aortic and both did well. Twelve were mitral stenosis, and one of them died. Fourteen were mitral regurgitation, and two of these died.

*Half Narcosis (Daemmerschlaf) in Labor.*—Gauss (*Arch fuer Gynecol.*) gives a detailed description of 500 confinements with the use of scopolamine-morphine anesthesia. He experimented upon 233 primipara and 267 multiparæ, the results being uniformly satisfactory. He usually began with a dose of 0.00045 to 0.0006 scopol hydrobrom. and 0.01 morphine muriat. If the effect of this injection was not distinctly noticeable another hypo-

dermic was given containing half the amount of scopolamine and no morphine. The first mentioned dose is then repeated when the patient awakens from her slumber. This half anesthesia was in some instances continued for several days without any disadvantage to the patient. This anesthesia is contraindicated by the following conditions: Primary atony of the uterus, extreme debility of patient, fever, anemia, and a condition of somnolence. This anesthesia seems to be free from any danger either to mother or fetus.

*Diagnostic Significance of Decidual Tissue.*—Graves (*Boston Med. and Surgical Journal*). The expulsion of a decidual membrane in a patient with symptoms of pregnancy and with a mass on one side of the uterus is extremely suggestive, but not conclusive for the diagnosis of an ectopic pregnancy. Thus, an ordinary miscarriage may be preceded by the exfoliation of a part or the whole of the decidua vera. It is extremely difficult under the microscope to make a differential diagnosis between a dysmenorrhœic membrane and the decidua of an extra uterine pregnancy. The pathologist before committing himself to a diagnosis, should insist on knowing accurately the history of the case, as is true in any case where there is an attempt to make a clinical diagnosis from the microscopic examination of tissues.

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## OZENA.

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BY E. F. HITCHCOCK, M. D., NEW YORK CITY.

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SOME three months ago a young lad, twelve years of age, was brought to my office with the request from his teacher that he be sent home by me, as the Medical Inspector of the City Board of Health. As he entered the room I was much impressed by the fearful odor from him. It was indescribable and permeated the entire room. Not having seen a case like this before, I made a careful examination for the cause.

He was anemic, had difficulty in breathing, was somewhat emaciated, and seemed poorly nourished. On questioning him I

found that this condition had existed for some time (two months or more), the odor steadily becoming worse. He had been treated by physicians unsuccessfully in the meantime. As the rules of the Board of Health of this division limit me to simply a diagnosis, I pronounced the case from the odor, history, and limited examination, a case of ozena or fetid form of atrophic catarrh, with a possible necrosis or caries, and referred him to the Nose and Throat Hospital of this city; his teacher and the principal meanwhile protesting against his attending school, and as I had no authority to send him home, the disease not being recognized as contagious, I advised that he be allowed a seat by himself.

At the end of two weeks' time, not seeing what I would consider much of an improvement, I on my own responsibility gave him a K. & O. Douche and a small bottle of Glyco-Thymoline. In about ten days' time the odor was hardly perceptible and at the end of two months it had entirely disappeared. His general condition was remarkably improved as well as his sense of smell. The case was watched daily both by myself, the principal, and his teacher, who became much interested as the case progressed.

*Summary:* The boy has not lost a single day at school, his sense of smell is completely restored, and his health has never been better.

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### A SHEET ANCHOR IN PNEUMONIA.

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BY S. W. UMSTOT, M. D., OF HAGERSTOWN, MD.

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Two years ago I began to use Antiphlogistine in the treatment of pneumonia, and it has proved my "sheet anchor" ever since. My custom is to make daily applications, and by using it in this way I am able to hold the disease in check. Antiphlogistine reduces the inflammation without reducing the patient's strength, and owing to its many virtues, is strongly to be recommended as an adjunct in the treatment of pneumonia.

The following is a brief statement of results in a few cases:—

*Mrs. G.*—Was called January 28, 1905. An examination proved lobar pneumonia, in the upper lobe of the right lung. I

applied hot Antiphlogistine and the cotton jacket. Next day the patient was doing well. I renewed the dressing daily for four days, when it was discontinued, as the necessity for its use had passed away. The recovery was uneventful.

*Mr. K.*— Was taken ill April 12, 1905, with his second attack of double pneumonia. I at once applied Antiphlogistine and a cotton jacket, and renewed the dressing daily. In two weeks he was sitting up, and he made an uneventful recovery.

*Mrs. D.*— A woman with a tubercular diathesis, was stricken with pneumonia of the right lung, Dec. 4, 1905. Antiphlogistine and the cotton jacket were used as in the preceding cases. I discontinued my calls in twelve days, after a complete cure.

*Mrs. S.*— Was called Feb. 22, 1906, and found double lobar pneumonia. Applied Antiphlogistine, hot, then daily until the eighth day, when the crisis was passed. Antiphlogistine was of inestimable assistance in this case.

*Mr. A.*— Forty-five years old. I first saw the case April 22, 1906, found a double lobar pneumonia with pleurisy of the left pleura. I at once applied Antiphlogistine as hot as could be borne, and used it daily for twelve days. On the sixth day the evening temperature registered 105.8°. The temperature dropped by lysis and he made a good, although slow, recovery.

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## Selected Articles

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### MORPHINOMANIA AND KINDRED HABITS.

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BY J. HOWE ADAMS, M. D., OF PHILADELPHIA, PA.

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AUTHORITIES vary greatly with respect to therapeutic details and the great lines of treatment of "the habits." It is peculiarly the field of operations of the quack and the charlatan, from the so-called "White Ribbon" remedies to be given secretly in tea or coffee to voodoo methods.

In the first place, the peculiar mental condition of these habits is not studied as much as it should be, which explains the dis-

crepancies of many cures reported by practitioners who are but little experienced in this line of work. Especially is this true in morphia cases. Here we find a peculiar psychological condition similar to hysteria, which forces the patient to try instinctively to deceive the physician. In three cases out of four the patient will try to get extra doses; he always wants it just for that day; next day he will stop this backsliding, and so on from day to day this self-deceit continues, although he fully knows how impossible cure is under these conditions. Hence the doctor is deceived; while he is reducing the dose the patient increases it, so that when the attending physician pronounces the case cured the patient may be taking more drugs than ever. The patient will thank his physician, compliment him, and pay his bill, and yet he knows how false the cure is. So the working rule to make is, "The word of a morphine habitue is utterly unreliable." There are two ways of discovering the truth; first, analysis of the urine will reveal morphine if the dose amounts to two grains daily; and, secondly, uninterrupted continuous surveillance for long periods will show the attitude and bearing. The state of the pupil may reveal nothing, for patients have been known to take atropine to disguise the true condition. In the average practice, even with the most efficient suspension, not more than one case in four can be really controlled. Physicians are largely victims of misplaced confidence in these cases.

Opium eating seems to be the normal condition of the Oriental. His nervous system stands it better, and its dreamy states suit his mystic nature well. Again, alcohol is forbidden among Mohammedans, and to an extent among Buddhists, Hindoos, and Moslems. The extent of opium eating in Asia is shown when in one town, Samarang, eight thousand pounds have been consumed monthly. The license fees in India have amounted yearly to nearly five hundred thousand pounds sterling, a stupendous amount, beyond the bills of our own alcoholics.

On the people of the Occident opium acts with far greater poisonous effects. The superior nervous systems of the Caucasian are much more exposed to injury than the sluggish system of the Asiatic. American children are accustomed to it from in-

fancy, in soothing syrups, in "baby friends," in paregoric, and in laudanum — as the old minstrel song said, "Paregoric by the bottle, emptied down the baby's throttle."

Physicians seem peculiarly exposed to temptations from this source, for opium is an anodyne and stimulant; it increases for a time the power of endurance and it brings sleep; or suffering from some painful affection the hypodermic injection of morphine becomes quickly very soothing. I have been told by physicians that they were as much slaves to morphine, taking a sixth of a grain at a dose, as later taking five, ten, or fifteen.

Jouet collected one hundred cases where the habit followed the therapeutic use of morphine; thirty-two were cases of ataxia; twenty-four of neuralgias; especially sciatica; eight of asthma; two of dyspepsia; nine of painful tumors, etc. So we must remember our responsibility, for a large proportion of cases follow the use of the drug as a medicine. Here is another working rule: Never let your patient know he is taking opium in any form. The use of codeine is excellent, even if for no other reason than the patient does not realize it is a sister to morphine.

Sex and age have little influence on the habit — a baby may have it, or an old man. It is not usually most common between thirty and forty. Kane, years ago in a work, "Drugs that Enslave," claimed that women were far more likely to be victims than men, owing to their liability to nervous disease. Yet, on the other hand, Sevinstein, in one hundred and ten consecutive cases, had eighty-two men and twenty-eight women. Sevinstein believes that familiarity with the use of drugs exerts a predisposing cause, for of this series forty-seven were in persons connected with the medical profession — thirty-two doctors, eight doctors' wives, one physician's son, four nurses, one midwife, and one medical student.

We can divide the symptoms of the confirmed opium habit into two groups — the symptoms of chronic opium poison, and the symptoms due to the withdrawal of the drug.

In chronic opium poisoning the individual, for a longer or a shorter time, preserves the appearance of moderate health. After a time, however, the appetite and general nutrition fails, emacia-

tion becomes marked, while anorexia and thirst develop. The skin becomes dull, relaxed, and inelastic. Herpes zoster may appear if the patient uses hypodermic injections.

There is a peculiar brilliance of intellect at times among these patients following the ingestion of the drug that I find very little noted in the text-books. The mind thinks fast, the imagination flows on and there is a general feeling of bien-etre, only to be succeeded by a dull, sluggish frame of mind. Here morphine has just the opposite effect from what it has on the normal individual. The heart's action is apt to be irregular and weak, while disturbances of the vasomotor system causes flushings and sweatings.

The progress of the habit is steadily onward as a rule. Finally, the drug fails to relieve the condition and a period of severe mental and physical derangement sets in. This, unless relieved, ends in death by inanition, or, very often, in suicide.

When the drug is withdrawn general malaise, progressive restlessness, profound depression, precordial distress, pallor, or cyanosis, all appear. The heart's action becomes slow, irregular, and thready. Intellection is slow, speech stuttering or hesitating.

It is hard to diagnose this habit unless some clue is given by the patient or his family. Close inquiry is sometimes necessary to confirm the diagnosis. It is extremely difficult to get the truth as to the dose. The prognosis is good as far as discontinuance for a time, but bad as regards a permanent cure, for relapses are common.

When we take up the treatment of the morphine habit we undertake a difficult, trying, and embarrassing work. The physician has a tremendous responsibility. Undoubtedly, many cases result from medicinal use of the drug, and the doctor has an amiable weakness or thoughtlessness. The physician must decide for himself in what class of cases he can use the drug with safety. But we must remember that at best the practice is a dangerous one. When it comes to the cure of these cases, the doctor should not hamper himself. Home treatment is a problem; some patients seem to be cured there, but the cases are the exception. It is hard to maintain discipline in the home; friends



and relatives are constantly interfering. A private asylum or well-lighted rooms in the upper part of a private house are to be preferred.

There are two recognized methods of treatment: the gradual diminution of the dose, and the abrupt suppression of the drug.

If it is decided to isolate the patient, it should be arranged that his room be so arranged that he cannot commit suicide, with everything of the pleasantest, simplest character. From the start the patient must not be left alone; for this purpose two attendants are needed, one for night and one for day service. They must be skillful and firm, and of a character to withstand bribes. Make the break with the patient's family as complete as possible. No letters should be allowed, and visiting should commence only when convalescence is well established. Driving and walking are excellent, when the patient's health allows of their use.

The direct method of abrupt discontinuance of the drug has been called the "method of Sevinstein," from the name of its chief advocate. In the words of its principal adviser, the following directions should be followed:—

"Upon admission the patient is given a warm bath, during which time careful examination of his effects is made by a responsible person for the purpose of securing the morphine which the patients, notwithstanding their assertions to the contrary, frequently bring with them. These measures of precaution are by no means unnecessary. An officer had saturated his cigarettes and cigars with a solution containing opium, and smoked for twenty-four hours almost without interruption. Another officer had slipped morphine between the soles of new slippers. Other individuals concealed immediately after their arrival morphine in powder in the upholstery of the sofa, upon the canopy and in the ventilators of the windows. Other patients enclosed morphine in envelopes of thin paper, which were placed between the leaves of their books, stitched it into the folds and lining of their garments, etc.

"The first symptoms of the withdrawal of the drug show themselves in delicate individuals at the end of three or four hours, and in robust persons about fifteen hours, after the last

dose. These symptoms consist of malaise, restlessness, a sense of muscular tension, chilly sensations, and the like, but do not demand treatment. As soon as shivering commences the patient must be put to bed — a measure to which, as a rule, he readily assents on account of the sense of muscular fatigue now experienced. For the relief of the headache, which is rarely absent, applications of cold water or of ice or ether-douches to the forehead may be employed.

“For the distressing gastralgia compresses moistened with chloroform may be applied to the epigastrium. The colic, which is often distressing, may be treated by sinapisms or hot compresses. The nausea and vomiting and epigastric distress, which are apt to continue for several days, may be treated by a solution of bicarbonate of sodium with tincture of nux vomica and essence of mint. If the vomiting be excessive, recurring twenty or thirty times in the course of twenty-four hours, small doses of morphine by the mouth must be given. If by reason of the continued vomiting and inability to retain nourishment dangerous exhaustion develops, nutritive enemata must be administered. The diarrhea requires little treatment during the early days. If, however, it be excessive and persists beyond the third or fourth day, large enemata of warm water of a temperature of 98° F., repeated two or three times during the day, are attended by excellent results. The insomnia, which constitutes a most distressing symptom, defies every kind of treatment during the first three or four days. During this time prolonged baths are not well borne, and even when they are employed they scarcely produce more than half an hour or an hour of sleep. Chloral is also, under these circumstances, inadmissible. Whether administered by the stomach or by the rectum. It does not induce sleep, and its employment is very often followed by a very high degree of excitement. After the fourth day it is well borne by many persons, and manifests its usual hypnotic property. Warm baths of five minutes, followed by cold effusions, exert an excellent influence upon the general debility and mental depression of the first days. The objections of patients to these baths cease after they have experienced the excellent results which follow their

use. During the bath stimulants, such as champagne, port, and hot bouillon, may be given. Care must be paid to the alimentation from the very beginning of the treatment. During the first days liquid nourishment should be given, and abundance of wine and other alcoholic beverages, according to the previous habits of the patient. Some nourishment is to be given every hour or every two hours. Many patients experience an intense craving for alcoholic drinks; others, on the other hand, are unable to take them. To the former, wine, beer, etc., may be given freely during the first three or four days; to the latter a restricted milk diet may be given, one to two quarts in the course of twenty-four hours."

Another method, similar in character, is that of Erlennmyer, who used the rapid reduction method, supplementing it with a special bromide treatment, taking a week or twelve days. The trouble with both these methods is that they are attended by indescribable suffering, and often serious danger, even collapse and delirium tremens. The collapse demands immediate treatment, for the pulse grows feeble, small, gradually diminishing in frequency with a slowing of the respiration. Inhalations of ammonia and the administration of aromatic spirits of ammonia, brandy, hot coffee, with friction of the surface, may bring about a reaction. As a rule, it is often necessary to administer morphine hypodermically. In delirium tremens, treat the symptoms as they arise.

In the gradual reduction of the drug, various plans are suggested. Ball and Jennings withdraw the drug, using the sphygmograph, giving heart tonics as they are required. They prefer sparteine on account of the facility of using it hypodermically. Jennings prefers, if possible, digitalis by the mouth.

This is Professor Jennings' description of his method:—

"To take, then, a patient injecting, say, 20 grains of morphia a day. By way of preliminary the patient gives up syringe and solution, and consents to any search that may be necessary that nothing of the kind is secreted. He has agreed to submit himself to constant supervision, and as regards morphia he has the assurance that there shall be no compulsory reduction. In case of

exceptional suffering, an extra amount will be given. For if on the one hand it is essential that there should be constant surveillance to guard the patient against giving way to an unfortunate impulse, on the other hand he should be made to understand that it is by his own free will that he carries out the programme from day to day and makes his progressive decrease. For the first few days he would reduce by a grain daily, having perhaps begun by an initial drop of from three to five grains. As soon as a grain becomes irksome half a grain, later on a third, a fourth, and finally a sixth would be a sufficient reduction. Tinct. of digitalis in small doses should be given as soon as the heart becomes sluggish, and continued as required. Very frequently there is some little difficulty in proceeding further, at about four grains, but by allowing a break in the progression of a day or two, with perhaps even a fraction of a grain extra during this time, a rest is obtained, and the treatment resumed smoothly. At about two grains almost invariably comes the first real difficulty, and if there were no way of turning it very few patients would get below this figure. As a matter of fact, however, henceforth the hypodermic suppression proceeds uninterruptedly. Henceforth for every sixth of a grain suppressed hypodermically, twice the amount must be given by the mouth or rectum. This may seem like a retrograde movement, inasmuch as in the course of the next twelve days the quantity of morphia will be doubled, but in reality the great matter is the giving up of the syringe, and this is always effected without the slightest difficulty. Whatever little miseries may occur, later or earlier the patient never feels so satisfactory an effect from his ration as at this time. Once the hypodermic injections are set aside, the supplementary doses are gradually reduced to zero, and if the progression is properly carried out, the cure may be successfully accomplished with but a night or two of restlessness, or requiring hypnotics.

“In the course of the treatment there may be occasional restlessness, which is intensified during the last few days, but there need be nothing like suffering if a sufficiently slow progression is adopted. Indeed, many cases have been communicated to me where the cure has been operated unknown to the patient.”

The mental state of the patient calls for the display of much firmness, tact, and gentleness on the part of attendants and physician. Everything should be done to inspire courage and hope in the patient.

Many hospitals have a nice way of reducing the amount of opium. Most patients can estimate the dose they are getting, unless it is disguised in some way. To do this, mix the morphine in powdered form with powdered quinine; both are white and the bitter taste of the quinine effectually disguises the other drug.

The brilliant Benjamin W. Richardson made the prediction within two years of Liebreich's discovery of the medicinal properties of chloral, that it would be abused and that a "habit" would follow its continued use. This has proved too true. It stands next to opium and alcohol in the extent of its use. It is used largely by the more educated classes of society; its fascinations are unknown to the great mass of the people who fall back on alcohol for their dissipation. As with opium, its use is due to its continuance after the illness for which it has been given has ceased. Many druggists are culpable here, for they continue to dispense the drug to patients when they know the real need for it has passed.

Chloral in its use has less effect than opium or morphine; the craving for it is less intense and other drugs easily satisfy the patient at times. Derangements of the digestive system are common, but not necessary; they are due to the direct irritant action of the drug upon the mucous membrane of mouth and stomach. It affects the circulation, weakening the vasomotor center and slowing the heart's action. Hence flushing of the face, congestion of the eyes, and fulness of the head are common symptoms. The blood shows signs of anemia, and dyspnea is common. Unlike opium, the hypnotic effect is usually maintained, so that the patient is dull, apathetic, and inclined to neglect his daily duties and cares. Headache is a very common symptom, and vertigo is often experienced. Sensory disturbances are often present, such as local regions of hyperesthesia or anesthesia, formication of the surface of the body and neuralgic pains.

The transient stimulating effects of opium or morphine are not seen in chloralism, and the symptoms produced by its abrupt discontinuance are not severe generally. Insomnia is the chief complaint, while headache and neuralgias are increased. As with morphine habitues, chloral takers are persistent liars, and can conceal their vice adroitly. Prognosis under treatment is excellent, but untreated it is highly unfavorable.

In the treatment it is best to stop the drug at once, and supply its place for a few days by alcoholic stimulants. Systematic feeding, full doses of quinine and strychnine are necessary, while it is well to treat the other symptoms as they arise. The patient should be isolated and cared for by a watchful attendant.

There are other drugs which enslave as well as the classic three, alcohol, opium, and chloral. One of these is paraldehyde. It is often taken as a substitute for chloral. Wilson relates a typical case of this habit, as follows:—

The patient, a young married woman whose family history was bad, her mother having died insane, contracted the chloral habit after an acute illness. After some months a cure was effected without great difficulty. She relapsed into chloralism after a second sickness which was attended with distressing insomnia. The habit was again broken up. In consequence of over-exertion in social life during a winter of unusual gayety insomnia recurred. For the relief of this condition, paraldehyde was prescribed with success. Notwithstanding its disagreeable and persistent ether-eal odor, and the precautions taken by the physician, this lady managed to secure paraldehyde at first in small quantities, afterward in half-pound bottles from a wholesale druggist, and took it in enormous amounts, with the result of producing aggravated nervous and psychical disturbances corresponding to those produced by chloral, but without the disturbances of nutrition attendant upon the abuse of the latter drug. The patient remained well nourished, retained her appetite and digestion, and was free from disorders of the skin and the intense neuralgia which had been present during both periods of chloral abuse. She suffered, however, from a persistent binding headache, disturbances of accommodation, phosphenes, and brow-pains. Under the in-

fluence of moderate doses she was enabled to take part in social life with some of her old interest and vivacity. The brief intervals of abstinence which occasionally occurred were characterized by distressing indifference to her friends and surroundings and by apathy and depression. At frequently recurring intervals the indulgence in excessive doses, constituting actual paraldehyde debauches, was followed at first by maniacal excitement of some hours duration, later by profound comatose sleep lasting from one to three days. Upon the complete withdrawal of the drug this patient manifested the symptoms produced by complete abstinence in the confirmed morphine habit — yawning, anorexia, epigastric pains, vomiting, diarrhea, absolute sleeplessness, extending over several days, heart failure, collapse, colliquative sweating, and finally well-characterized delirium tremens. At the end of a week, under the influence of repeated small doses of codeine, sleep was secured, and within a month convalescence was complete. This person now continues free from addiction to any narcotic, in good health, and able to sleep fairly well, after the lapse of several months since the complete discontinuance of paraldehyde.

*Cannabis indica* is largely used in India and Egypt as a narcotic, but the only cases found in America addicted to this drug are those who have tried it in place of morphine. Occasionally a druggist will get qualms of conscience about selling morphine and will try to substitute this drug. The writer had one case of morphine-taking where the patient sought relief by drinking largely from a bottle of this drug. Again, cocaine is growing to be a serious menace, owing to its use in dusting powders, nasal conditions, etc. Its effects are disastrous, but the case must be handled as are opium patients. Ether and chloroform are occasionally used, especially by hospital attendants, but their use can scarcely be called habits.

After all, the greater problem in this question is the prophylactic phase. The medical man has a great responsibility in the administration of drugs. There are many people who are predisposed to drug habits. They fall easily and quickly into the use of alcohol, opium, or chloral. We are fast waking to the fact that the patent medicine habit is chiefly alcoholic in character.

Unless the medicine is a "repeater," *i. e.*, the patient continues to buy it, the manufacturer loses money. He has found that alcohol makes "repeaters," and hence the habit.

There are two classes of patients on whom these drugs are especially indicated: Chronic affections and painful acute illnesses. In such chronic cases as visceral or external cancer, advanced phthisis, tabes dorsalis, etc., the use of morphine, if it gives relief, is allowable. Again, in those cases of grave valvular or degenerative heart disease, where the patient is firmly addicted to a drug habit, it may be better to continue the drug, for the dangers of withdrawal may be too great. But in chronic cases, where there are chances for recovery by operation, the habit should be cured. Such cases are floating kidney, renal abscess, intractable localized neuralgias, etc. Nowadays surgical treatment is indicated in these cases, and the possibility of cure renders it desirable to stop any depressing habits.

In painful, acute diseases be most chary of using drugs that are likely to form habits. It is criminal to use a hypodermic needle habitually in such cases, for the patient often learns to demand it. Watch your patients carefully, know their weaknesses, and be on guard to prevent the development of any habit. — *Medical Times*.

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## ***Editorial.***

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### THE SCIENCE AND ART OF MODERN SURGERY.

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"To OPERATE or not to Operate — Aye, there's the question,  
"Whether 'tis better to bear the ills we have,  
"Than fly to those we wot not of."

The latter fourth of the nineteenth century and the initial years of the twentieth have witnessed a most wonderful extension of the broad field of surgical practice. Surgical clinics as known when the first volume of this journal was issued being mainly limited to amputations, resections, dislocations, fractures, trephining for traumatism, operations for osteomyelitis, strangulated hernia, extravasion of urine, removal of benign and some malignant growths, ligation of arteries for aneurism and hemor-



rhage, together with incised, punctured, gun-shot, lacerated, and other traumatisms, with an occasional ovariectomy. While a few imperfect and ineffectual efforts had been made for the radical cure of hernia, the principal reliance was on the truss, the appendectomy, stomach and kidney operations, gall stone surgery, abdominal and vaginal hysterectomy, tubal removal, laparotomy for peritonitis and other conditions, resection of intestines for malignant disease, typhoid and other perforations, including gun-shot and other wounds, thyroidectomy, laryngectomy, laminectomy, and brain and spinal cord surgery of to-day were unknown, untried, and unexplored fields.

Gynecology, the minor part of which was then surgical, has now become wholly so, and the general practice of medicine shows far wider and more extended application of surgical therapeutics than ever before; in fact, more than was ever dreamed of in the medical philosophy of former days. With the chisel and trephine brain tumors and abscesses are now approached with the directness of precision, and under the beneficent means of asepsis every nook and corner of the abdominal cavity is explored, the spleen, portions of the liver and lungs have been resected or removed. portions of ductless glands transplanted, the larger bloodvessels, and even the heart itself, has been sutured, and cirrhosis of the liver and kidneys treated by surgical measures widely varying in character, and this is but a bare synopsis of some of the most marked and astounding advances of the science and art of surgery.

The progress has been most wonderful, the advances more than marvelous; much suffering, pain, and anguish have been relieved, many valuable and useful lives materially prolonged, and grim death not only held at bay for the time being, but absolutely put to flight by the grand and beneficent boon of modern surgery. And yet, withal, two most excellent articles during the past year presented by able, conscientious, and eminent observers brings forcibly to mind the important but graphic legend now often seen by the wayfarer, which if unheeded may be direful, viz.: "*Stop, Look, Listen!*" A butcher, even, by practice, experience, and adeptness in the use of his knife may rise to the realm of art. The art of surgery is the "*knowing how*," its science, "*the knowing WHEN!*"

In the *Medical Review of Reviews*, December, 1906, is a most excellent article by Thos. E. Satterthwaite, M. D., of New York City, which was read at the annual meeting of the American Therapeutic Society in May last, from which we will quote somewhat lengthily, regretting that our space will not permit its reproduction in full; its title being, "*The Duties and Responsibilities of the Physician in Border-line Diseases.*"

"The management of diseases on the border-line between medicine and surgery has received very little attention from our medical text-books. In fact, these diseases have seldom been treated judicially, *i. e.*, from the dual standpoint of the physician and the surgeon. For example, in the

late edition of a well-known practice of medicine a case of appendicitis is held to be so pre-eminently surgical that it is to be turned over to a surgeon as soon as it has been recognized by the physician in attendance. But such an attitude of mind puts the physician in a false position, where he not only jeopardizes the prospects of his patient, but makes himself liable for adverse criticism, as I shall proceed to show.

"To affirm that there is no *medicinal* treatment for appendicitis is to some extent true, and this statement has been made, but there is a distinction between the word *medicinal* and *medical*, and the statement I here criticize might easily be misconstrued into the inference that a physician should favor an operation under all circumstances, a view that is not held by many of the best surgeons of our day. In fact, so experienced an operator as Treves, who has certainly achieved a world-wide reputation in the treatment of appendicitis, maintains that the vast majority of perityphlitis (appendicitis) patients get well without an operation, and that the disease only progresses to suppuration in the minority.\* Indeed, some of our best surgeons now seem to favor Ochsner's plan of lavage and rest, during the third, fourth, and fifth days; and in the stationary stage, rest and a guarded diet.

"But the physician's attitude just mentioned is also unfair to the surgeon, because it throws on him the entire onus of the treatment, and all that it may entail, the physician not necessarily assuming any responsibility, so that if there happens to be an unfavorable issue following the operation, he may calmly shrug his shoulders and say, "I did not recommend it." It is unfair also to the patient, because he is thereby deprived of a counsellor to whom he went for the best advice. These are facts that seem to merely require stating in order to be acknowledged.

"But the same criticism I am now levelling at the medical practitioner, who fails, as I understand it, to appreciate his duties and responsibilities in this particular class of cases, may also be directed at him in certain other instances, as where he is called on for a professional opinion in the treatment of the twenty and more diseases that lie on the border-line between medicine and surgery. In every one of them there are times where the medical attendant may very properly ask himself: Is this an operative or non-operative case? I now allude to the subjects of abdominal and pelvic tumors, cirrhosis of the liver, pancreatic diseases, morbid collections in the kidney, chronic Bright's disease, cholelithiasis, intestinal hemorrhages, obstruction or traumatism, enlarged prostate, pleurisy or pericarditis with effusion, acute or chronic mastoid operations, diseases of the accessory sinuses, malignant tumors in general, epilepsy, hemorrhoids, and even habitual constipation.

"That surgery is advancing rapidly and entering fields that were once exclusively occupied by the physician must be recognized by all of us. It

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\* Treves, System of Surgery, Vol. II., p. 627.

is no part of the object of my paper to decry this fact. Our task, whether as physicians or surgeons, is to bring comfort to our patients, either by relieving them from distress or pain, or by effecting a cure, if that be possible. And it should be our business and our pleasure, as well, to see that we employ the means that offer the best chances for success, whether they be medical, surgical, mechanical, dietetic, or even psychic, and alone or in combination.

"And so these changed, changing, and I may add, still further to be changed, relations between medicine and surgery, that have of late years forced us to look at the border-line diseases from the double standpoint of the physician and surgeon, make it obligatory for the conscientious practitioner to keep himself informed as to the comparative advantages of all the methods in vogue, not only as applicable to any given case, but to the various phases of it; so that he may be ready at all times to give his patients the benefits of the treatment that offers them the best prospects for relief.

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"As a man who once practiced surgery pretty actively, both at home and abroad in the early part of a professional career, and who performed most of the operations of the general surgeon, prior to the era of laparotomy, I feel a peculiar interest in this subject, because I am able to look at it, to a certain extent at least, from the double experience of the physician and surgeon.

"From my point of view, then, medical men should keep themselves constantly informed as to the latest improvements in the treatment of disease, whether medical, surgical, mechanical, hydriatic, dietetic, or even psychic, and, particularly, should be able to form and give intelligent opinions as to the question of operative or non-operative measures in any of the affections already enumerated. The physician is then prepared to enter the consulting-room armed with definite data, from which to draw intelligent conclusions, perhaps in the light of other facts elicited by the surgeon, or brought to his notice by the patient or his friends.

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"In fact, the increasing success of surgeons is largely if not chiefly dependent on closer attention to diagnosis, including not only a more thorough study of their patient's histories and symptoms, but the use of aids the physician more especially recognizes, such as pathological and laboratory teachings, and the newer methods of physical examination. Experience and improvement in technique have contributed to better operative results, but only in a minor degree. If therefore physicians excel surgeons in diagnosis, what can conduce more to the successful issue of a case than that the two should contribute each his quantum of information and experience in these border-line diseases? Indeed, the success of the Mayos is attributed by a prominent American surgeon not so much to their

remarkable technical abilities as to thorough investigation of their patients before operation, by the most expert assistants obtainable, and the best instruments of precision.\*

"In fact, a surgeon may imperatively require both the counsel and co-operation of the physician, under other circumstances. If, for example, the chances of life are going to be slightly improved by an operation, but the surgeon hesitates, perhaps, because his personal experience has been unfortunate in this particular line of affections, and he is not desirous of adding one more failure to his series, it then becomes the imperative duty of the physician to urge the operation, as the method that (barring obvious contraindications) holds out the best prospects of success. Let us take individual instances. I remember on one occasion, when in general practice, that I called in an aural specialist to operate on a case of suspected acute mastoiditis. He hesitated because he thought the symptoms not sufficiently pronounced. I urged. The operation was done. It is true that after the mastoid cells had been exposed no pus was found, but there was great local congestion. Relief of the unfavorable symptoms followed the operation, and the issue was satisfactory. On another occasion when I had been telegraphed for, to hurry with a surgeon to New Haven, to advise in a case of suspected appendicitis, that turned out to be one of the larval form, where the local surgeon was opposed to the operation at first, I urged it. A disseminated purulent peritonitis of the septic form was found, and a second operation became necessary within the next forty-eight hours. The patient died a few days later. And yet I feel confident that the operation was indicated, because statistics up to that time had shown that under these conditions a patient had somewhat better prospects for recovery with the operation than without it. On the other hand, in a case of appendicitis which I saw in 1897, with two surgeons and one medical consultant, we could not reach an agreement. The two surgeons favored an operation, the two medical men, including myself, opposed it. When our differing views were presented to the patient, however, she promptly declined the operation, arguing that her attacks came on infrequently and had never been severe. She recovered and has never had a recurrence.

"On another occasion I was requested to go to a neighboring town to advise in a case of contemplated operation for appendicitis in a young man. After examining the abdominal tumor, and cross-questioning the patient, I discovered that he had been engaged in a village scuffle, and in the *melée* had received a blow on his belly. For reasons satisfactory to himself he had refrained from letting these facts be known. When this new aspect of the case was made apparent to the surgeon, the operation was postponed indefinitely. There has been no subsequent trouble.

"Such incidents as these go to illustrate the statement that the diagnosis and treatment of border-line diseases may be quite as much within

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\* Bernays, *New York Medical Journal*, April 21, 1896.

the grasp of the physician as the surgeon. Besides, it is notorious that the diagnosis of appendicitis is no simple matter, and that even the most experienced surgeon may fail, laparotomy disclosing a cholecystitis, salpingitis, pancreatic disease, pleurisy, or even nothing more than impacted feces. Indeed the seat of greatest pain may be over the appendix while that organ is perfectly normal, or the pain may be confined to a fibroid induration, left over from an obliterating appendicitis (perityphlitis).

"Now, the following facts about appendicitis are matters of record and should be known to every practicing physician. Though it is a serious disease, recovery will usually take place without an operation; and spontaneous resolution is among the possibilities, and even after gangrene of the organ has taken place, as is now well known. If, however, the patient has recovered from one attack without an operation, the chances are somewhat in favor of his having another attack. So far as curability without operation is concerned, in 121 cases reported previous to 1890, collected by Furbringer,\* ninety-four, or 78 per cent., recovered. Renvers\* under similar circumstances found in his series of cases 91-92 per cent. of recoveries; Gutmann\* 96 per cent. Of Sahli's\* 7,213 cases, which he collected with a vast amount of pains, where 6,740 were not operated on, 6,149, or about 91 per cent., recovered, but recurrences occurred in 4,593, and yet of these 3,635 had no further attacks. On the other hand, according to Nothnagel,\* in circumscribed perityphlitis (appendicitis) the mortality under medical treatment was found by him to be 20 per cent., though if surgery in these particular cases had been invoked the mortality might have been only 3-5 per cent.; a saving of life of 15-17 per cent. in favor of surgery.

"Admitting, therefore, plainly as I do, that surgical operations in appendicitis have saved many lives, which would have been lost under non-operative treatment, this is far from saying that all appendicitis cases should go to the surgeon. Unfortunately some surgeons of our day are so pronounced in their statements as to the imperative duty of the physician to turn them all over to them as soon as the disease is even suspected, that some physicians will weakly yield the point rather than study the best prospects of the patient with the surgeon, in the light of such statistics as I have given. For such surgical enthusiasts would have the medical man believe that most cases of appendicitis die unless they are operated on. That this view is untenable is further shown by the findings of the Pathological Institute of Vienna—for according to Nothnagel\* between the years 1870 and 1899, when few operations were done for

\* Furbringer, *Deutsche Med. Woch.*, 1891, S. 299.

\* Renvers, *Deutsche Med. Woch.*, 1891, S. 299.

\* Gutmann, *Deutsche Med. Woch.*, 1891, S. 299.

\* Sahli, *Congress f. Innere Med.*, 1895, S. 218.

\* Nothnagel, *Spec. Path. u. Therapie*, 17, theil 2.

poses a previously healthy ureter to infection, and this danger should be held constantly in view.

"Another question of interest is as to the treatment of cancer of the stomach. One of our most distinguished surgeons\* charges physicians with subjecting such patients to medical treatment, which he declares must result in 100 per cent. of mortality, emphasizing the fact that medical means have never yet cured a case of gastric cancer; while recent surgical methods since 1900 have vastly lowered the mortality. He tells us that 25 per cent. of his cases have lived three years; and that one is alive and well after four years and ten months. That life may be prolonged by such operations is evident. Certainly my personal experience has taught me that patients with gastric cancer rarely live more than six months after the tumor is palpable. I believe that surgery has unquestionably won new laurels in this field; certainly it appears to have added to the expectation of life. It is too early to affirm, however, that any of these patients have been cured for all time, though it is quite possible some have been. For after all cancer, speaking broadly, is in most cases incurable, notwithstanding that it occasionally fails to recur. In Wood's 'Reference Handbook of the Medical Sciences,' published in 1885, I reported eight cases of cancer coming under my personal observation that have been operated on one or more times, and had lived from seven to thirteen years from the inception of the disease.\* In Cooke's Report from the London Cancer Hospital of 1,413 patients treated between 1851 - 1863, the disease had been kept in abeyance for ten years in four, and for seventeen years in one. In some of Cooke's cases,\* the arrest of the disease had followed mere local applications. The freedom from recurrence or delay of it may be due to surgical interference, but it also depends to some extent on the variety of the cancer, its location, the age, and, perhaps, personal peculiarities of the individual.

"However, as medical men, we must still admit that an advance has been made in the treatment of cancer, and by surgical means, and we hail any method that even prolongs life. It deserves our recognition and approval. And yet we need to know more of the after-history of these cases; and if, taking everything into consideration, the advantages are commensurate, in the patient's opinion, with the prolongation of his life. And as medical men we are not called upon to advise radical and dangerous operations until the last question has been answered, except when the prolongation of life will accomplish some useful end.

"In the great majority of instances, to which there are but few exceptions, peritonitis is a surgical disease, and while the opium and other forms of medical treatment are still useful in traumatic, simple, or non-

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\* Mayo, The Radical Removal of Cancer of the Stomach, by Wm. J and Charles K. Mayo, *N. Y. State Journal of Medicine*, Feb., 1906.

\* Satterthwaite, Cancer, in Wood's Reference Handbook, 1885.

\* Cooke, On Cancer, London, 1865.

infective peritonitis, in the majority it is surgical, and the advice of a surgeon should be sought, certainly in perforating gastric ulcer, intra-peritoneal abscess, perforative appendicitis, possibly in simple acute peritonitis;—and the operation is indicated as soon as the diagnosis is made—for if an operation is done during the first twelve hours, the chances are pretty certainly many times as favorable as when they are delayed beyond that hour. Even in perforation from typhoid ulcers, according to Rolleston's statistics, operations in the first twenty-four hours in 35 cases gave a recovery of about 28 per cent.; while of 713 cases, operation in the second twenty-four hours, only one recovered.

"As to the treatment in septic peritonitis opinions are divided. If it is general, the case is almost hopeless. If the toxemia is circumscribed, however, the chances of an operation are not so bad. The medical man should therefore in these cases of peritonitis be prompt in seeking the aid of a surgeon, if there are grave symptoms.

"Physicians are sometimes criticized by surgeons for lack of enthusiasm for operations. Granted. It is true that Emerson has told us 'Nothing great was ever achieved without enthusiasm,' but enthusiasm was once defined by Bishop Warburton to be a 'Temper of the mind in which the imagination has got the better of the judgment.'

"There is a mean between these extremes, and enthusiasm unless tempered by a proper regard for one's duties and responsibilities, deserves to be curbed.

"Briefly, in all these diseases, apart from prophylaxis, the physician has important rôles to play—he may check unnecessary surgical enthusiasm, confine surgeons to possibilities in their operations, prevent those that can have no real advantage except to determine facts of scientific interest, satisfy the monomaniac, or delude the neurasthenic into believing that the operation will restore health when it may develop a much more serious mental difficulty. Of course, it may be easier for the surgeon to say, as one said to me once, 'I make the diagnosis of appendicitis when I have opened the abdominal cavity.' But contrast such an attitude with that of the physician who, after a critical examination may, and often does, discover, without opening the abdomen, whether or not the case is suitable for an operation. How many utterly useless incisions have been made in the operation for appendicitis, when the trouble was elsewhere, we all know. For careful examination into the history of the case may disclose matters that the surgeon has not considered, as I have shown in this paper.

"We must also remember that while laparotomies are comparatively free from danger to life, the consequences are often very serious in the shape of internal adhesions that require secondary operations for their relief.

"On the other hand, in the matter of operations on the spinal cord, I



would say that they may be delayed too long. In one well-known case of tumor of the cord, that I saw in consultation after a growth had been removed from the canal by a prominent surgeon of this city, it was evident that if the operation had been done earlier a cure might have been effected.

"My limit of time does not permit me to go further into this general topic. But I will say that of all the border-line affections that I have enumerated, non-operative treatment, and certainly prophylaxis on the part of the medical attendant is of recognized utility in all—the exceptions being possibly diseases of the pancreas, and certainly pyothorax, and certain suppurative diseases of the abdominal cavity, such as of the liver and spleen, and further, that medical treatment will surely be practiced in all of them, barring those I excepted, as long as the world lasts.

"Finally, my contention is this—in all the affections alluded to, I would have the physician conversant with the best methods of treatment, whether surgical or medical, the proper time to call for surgical advice, and the chances for the patient's recovery under surgical as against medical methods. More than this, I would have the physician qualify himself to make the diagnosis in all these cases and be ready not only to sustain the surgeon, but even to urge an operation if, all things considered, it is best in the interest of the patient."

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The other most valuable and timely article from which we shall quote appeared in *Surgery, Gynecology, and Obstetrics*, in October last, and is by so renowned and reputable a surgeon as Arthur Dean Bevan, M. D., Professor of Surgery in Rush Medical College, of Chicago. It is a scorching, aye, a terrible arraignment of some who should have been trained better, some whose "enthusiasm" should be held in reasonable bounds, and of some who should never have been admitted into the profession, and who are a disgrace to their calling, a blot on the name of manhood, a blemish on the age. We can hope that the ignorant may become better informed, the enthusiast we can help, but the one who seeks but "filthy lucre" is deserving only of contempt and scorn, unless he can be reached through the courts of justice. We have far less respect for such than we have for a highwayman, and deem it far more manly; yes, more honorable to take a gun and on a dark night demand of the lonely traveler "his money or his life." He at least gives his victim some chance. He takes his own life in his hands, and possibly the victim may pull trigger first; but the other gives the unfortunate sufferer no chance whatever. Trusting in, and reposing confidence in the wretch who would with glittering steel maim and mar the "human frame divine" for the sake of the dollar, he or she has no chance whatever; but is a helpless sacrifice on the altar of human greed and avarice. However, we submit the quotation, which is as follows:—



\* \* \* \* \* "Modern surgery has been a great boon to humanity. Modern surgery has been so successful, it has become so easy to secure aseptic results, that there has grown up with it a curse, i. e., the doing of operations which are unnecessary and unwarranted. No class of operators has been entirely free from this curse, but the specialists, with their narrower range of vision and limited work, have undoubtedly suffered more from it than the general surgeon, who, however, has been by no means free from its influence.

"The principal sufferers have been women, and the principal offenders have been men who have limited their work to gynecology. Women are the easy victims of the surgeon who advises and performs unnecessary operations. Nine out of ten women who consult a physician because they do not feel well will believe, if they are told so, that their sexual organs are at fault, and will submit to an operation if it is suggested that it is necessary for a cure. The result has been that where the general practice of medicine shows a wider application of surgical therapeutics than formerly, the practice of gynecology has become wholly surgical. There are many gynecologists who do not think of taking charge of a woman except for an operation, and the percentage of women who apply to them for advice, and in whom they find no indication for an operation, is so small as hardly to form, as the chemist would say, a trace in the sum total. This situation is an interesting study, and I shall endeavor to give my impressions of it.

"Are all these operations necessary?

"In reply to this question, I shall say that my own impression of the surgical work done on women, especially that done by men who limit their work to gynecology, is that certainly thirty per cent. of it is unnecessary and unwarranted. These unnecessary operations are made up largely of the following:—

- " 1. Curettings without pathological warrant.
- " 2. Repair of the ordinary torn cervix.
- " 3. Amputation of the cervix.
- " 4. The repair of the relaxed outlet, without any visible impairment in function.
- " 5. The many operations for retroposition of the movable uterus.
- " 6. The operations for so-called cystic degeneration of the ovary; a condition which is found in almost all female cadavers, and which is physiological and not pathological.
- " 7. The removal of the uterus for small innocuous fibroids.
- " 8. The fixing of the palpable right kidney, which is so common in women, that, depending on the personal equation of the operator, it can be found in from ten to thirty per cent. of women.
- " 9. Operations such as resection or removal of ovaries because they are believed to be the cause of reflex symptoms in stomach, back, etc.

"If I am right in my statement that thirty per cent. of these operations are unnecessary and unwarranted, what is the explanation?

"Are these operators dishonest? Are they ignorant? Are they misguided surgical enthusiasts? The answer is, that some of them are dishonest, some are ignorant, and some are misguided surgical enthusiasts.

"Some are dishonest, and operate for the patient's fee. Some are ignorant of broad pathological principles, and operate on these cases because they have been taught by their professors and colleagues to do so. Some are misguided enthusiasts, who are honest, who have good anatomical and pathological training, but who have so limited their vision to their specialty that they believe that it and they are the center of the pathological female human universe, about which all else revolves.

"If I am right in my statements, what is the remedy for this condition, which so menaces modern medicine? I believe that it is publicity; frank, open discussion in just such journals as this, which is not limited to a single specialty, but is devoted to the broad field of obstetrics, gynecology, and surgery.

"A discussion in our medical societies of the subject of unnecessary and unwarranted operations might accomplish much good. Medical students must not be trained by the men whose misguided enthusiasm is responsible for most of this work. Operators must be made to realize more fully the great responsibility which is assumed in undertaking any operation, and must be made to see the criminal side to the unnecessary operation. Operators must broaden their horizon to cover the entire human body. The successful surgeon of the future will be the skilled general diagnostician who can operate. The gynecologist of to-day is extending his field and is operating on the appendix or kidney, gall-bladder or stomach, in many cases which, ten years ago, he would have submitted unsuccessfully to operations on the uterus and ovaries. The wider the territory which he covers, the better gynecologist will he become, and the fewer unnecessary operations will he perform.

"I have limited my remarks to unnecessary operations on women because these present such a glaring evil, and I have singled out the gynecologist because he is responsible for much of this work. The same criticisms are to be made of the general surgeon or the operator in any specialty, who for fee, or through ignorance or misguided enthusiasm, submits a human being to the risks and costs of an unnecessary and unwarranted operation. All praise to the splendid achievements of modern surgery, all honor to the modern surgeon who gives to his patients the benefit of operations which relieve suffering and prolong life; but what of him into whose hands a patient's life has been intrusted, and who for fee or fame, because of ignorance or enthusiasm, risks this life by an operation which is not necessary and is unwarranted?

"We should recognize the existence of this evil and make every effort to do away with it."

OUR CONFIDENTIAL FRIENDS.—We would not banish opium. Far from it. There are times when it becomes our refuge. But we would restrict it to its proper sphere. In the acute stage of most inflammations, and in the closing painful phases of some few chronic disorders, opium in galenic or alkaloidal derivatives, is our grandest remedy—our confidential friend. It is here also that the compound coal-tar products step in to claim their share in the domain of therapy. Among the latter, perhaps, none has met so grateful a reception as "Antikamnia and Codeine Tablets," and justly so. Given a frontal, temporal, vertical, or occipital neuralgia, they will almost invariably arrest the head pain. In the terrific fronto-parietal neuralgia of glaucoma, or in rheumatic or post-operative iritis, they are of signal service, contributing much to the comfort of the patient. Their range of application is wide. They are of positive value in certain forms of dysmenorrhea; they have served well in the pleuritic pains of advancing pneumonia, and in the arthralgias of acute rheumatism. They have been found to allay the lightning, lancinating pains of locomotor ataxia, but nowhere may they be employed with such confidence as in the neuralgias limited to the area of distribution of the fifth nerve. Here their action is almost specific, surpassing even the effect of aconite over this nerve.

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THE ATTENTION of our readers is called to the advertisement of Robinson-Pettet Company, which appears on page 17 of this issue.

This house is one of long standing, and enjoys a reputation of the highest character.

The preparations referred to, we recommend specially to the notice of practitioners.

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PEACOCK'S BROMIDES have been made to meet every possible and exact requirement of the bromides; being a combination of the five bromides of the alkalies and alkaline earths, potassium, sodium, calcium, ammonium, and lithium. The salts employed in the manufacture are made especially for Peacock's Bromides and are purer and better than the commercial salts. The preparation will give the best possible bromide results with the least danger of bromism and gastric disturbances.

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NEW ORLEANS POLYCLINIC—*Post-Graduate Department of Tulane Medical College.*—The twentieth annual session opened November 5, 1906, and closes May 18, 1907. This school is intended for practitioners only. All instruction aims to be *clinical* and *practical*, and to this end, use will be made of the vast facilities offered at the great Charity Hospital, at the Eye, Ear, Nose, and Throat Hospital, and at the Special Clinics to be held at the Polyclinic.

Physicians in the interior, who, by reason of their isolation, have been deprived of all hospital facilities, will find the Polyclinic an excellent means

for posting themselves upon the status of the science of medicine and surgery of the day.

Those desirous of perfecting themselves in any special department or of becoming familiar with the use of any of the allied branches, such as Electricity or Microscopy, will be afforded every facility.

For information address NEW ORLEANS POLYCLINIC, P. O. Box 797, New Orleans, La.

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KRAMER'S \$5.00 BOOK OF "TRADE SECRETS" is offered by Sioux Publishing Co., of Sutherland, Iowa, for only \$1.25. It contains a large amount of very valuable information. It is the most complete work on Flavoring Extracts, and furnishes information as to their manufacture never before published; these can be made for thirty cents per gallon, and are sold at wholesale for \$3.50. It is an exhaustive, instructive, and interesting work; a marvel of comprehensiveness and utility to every one.

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W. B. SAUNDERS COMPANY, of Philadelphia and London, have just issued a revision of their handsome illustrated catalogue of medical, surgical, and scientific publications. Beyond question this is the most elaborate and useful catalogue we have ever seen. The descriptions of the books are so full, the specimen illustrations are so representative of the pictorial feature of the books from which they are taken, and the mechanical get-up so entirely in keeping with the high order of the context. The authors listed are all men of recognized eminence in every branch and specialty of medical science. The catalogue is well worth having, and we understand a copy will be sent free upon request.

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TRIFERROL.—This most palatable and readily assimilated hematinic and reconstructive will be found of the greatest service in anemia, chlorosis, scrofula, and all debilitated conditions. It does not blacken the teeth and causes no headache, constipation, or other digestive disturbances; indeed, it is an excellent appetizer. Dose: 1-4 drachms three times a day.

Drs. Alexander and Ury, who have used the preparation extensively in Dr. J. Boas' Polyclinic for Gastro-intestinal Diseases, state (*Deutsche Medicinal Zeitung*): "... We therefore possess in Triferrol a most excellent chalybeate which, as regards absorption and assimilation, is *second to no other hematinic* and has the great advantage of being readily taken and free from all gastric disturbances, even in pathological conditions of the stomach; thus Triferrol fills a distinct want and its extensive use is undoubtedly assured."

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ADMINISTERED AFTER OPERATION, Fellows' Hypophosphites exercises a most beneficial influence upon the patient's nutrition, fortifying the recuperative powers, and thereby hastening convalescence.

FOODS AND BEVERAGES AND THEIR ADULTERATIONS.—Timeliness of interest, aside from any other condition, lends especial importance to the announcement of the early publication of "Foods and Their Adulterations," by Harvey W. Wiley, M. D., to be immediately followed by a companion volume, "Beverages and Their Adulterations." Dr. Wiley is Chief Chemist to the United States Department of Agriculture at Washington, and his wide researches in the interests of purity in food commodities give anything he might write on the subject an authoritativeness that is unquestioned. The fact that the new National Food and Drugs Law became effective after January 1, and that public interest in it is now at white heat, will no doubt result in quite a demand for both volumes. The books will be generously illustrated from original photographs and drawings.

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COCA A TRUE HEART TONIC.—(1) Cocoa is a depurative of the blood stream, favoring the elimination of the products of tissue waste.

(2) Coca renders the muscular structure of the heart free to perform its functions untrammelled by a clogging of waste products in the blood which would otherwise impede function both mechanically and chemically.

(3) Coca acts directly on the cardiac muscle.

(4) Coca is a tonic to the vaso-motor nerves.

(5) Coca is a stimulant to the vagus center.

The value of Coca as a heart tonic should not be lost sight of. Unlike digitalis, Coca does not upset the stomach, is not cumulative, does not abnormally slow the pulse nor injure the heart muscle. It is not injurious or harmful in any way. Coca is useful in disease of the cardiac valves or of the heart muscle itself, as well as in allied troubles of the organs of respiration and of the kidneys. In mere cardiac weakness, whether from emotional irritation, infectious disease, or overstrain, it is an invaluable remedy; and unlike digitalis, it is particularly serviceable when the cardiac nerves are at fault. Besides Vin Mariani, the form advocated is the concentrated fluid extract, Mariani Tea, of which a drachm or two should be given at a dose about every three or four hours. When cardiac tonics are indicated enforced rest and a regulated dietary should be preliminary to all forms of treatment.—*The Coca Leaf*, May, 1905.

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LISTERINE DERMATIC SOAP contains the essential antiseptic constituents of eucalyptus (1%), mentha, gaultheria, and thyme (each  $\frac{1}{2}\%$ ), which enter into the composition of the well-known antiseptic preparation Listerine, while the quality of excellence of the soap-stock employed as the vehicle for this medication, will be readily apparent when used upon the most delicate skin, and upon the scalp. Listerine Dermatic Soap contains no animal fats, and none but the very best vegetable oils; before it

is "milled" and pressed into cakes it is *superfatted* by the addition of an emollient oil, and the smooth, elastic condition of the skin secured by using Listerine Dermatic Soap is largely due to the presence of this ingredient. Unusual care is exercised in the preparation of Listerine Dermatic Soap, and as the antiseptic constituents of Listerine are added to the soap after it has received its surplus of unsaponified emollient oil, they retain their peculiar antiseptic virtues and fragrance. A sample of Listerine Dermatic Soap may be had upon application to the manufacturers, Lambert Pharmacal Company, St. Louis, Mo., U. S. A.

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FACTS VS. FANCIES.—You can prescribe bichloride, carbolic, permanganate, hydrastis, tannin, zinc, or lead for leucorrhea or gonorrhea if you want to, but you can't get any more positive results, effects, quicker but harmless, no matter what you use, than *Tyree's Antiseptic Powder* will give you. It comes as near absolute perfection as material and skill can make it. Nothing can be put into a preparation for inflammation of the vagina and cervix to make it more desirable and satisfactory than is found in this one. You get the best antiseptic, astringent, and detergent known, all in one so modified by proportion and treatment that their individual objections have been eliminated. The bland, gentle, and quick effect of this powder is due in part to the selection of chemical agents as near noncorrosive in their natures as possible, treating them by a process of trituration by which a degree of harmless activity is acquired almost equaling that of the more powerful corrosive agent. Actual clinical tests have proven this statement to be absolutely correct in more than two thousand cases. Being cheap, cleansing, harmless, and very soluble, it can be used in such quantities as to insure more positive results than could be expected from an agent which must be used with precaution. A trial package will be mailed free of charge to physicians if they will send their name and address to J. S. Tyree, Chemist, Washington, D. C.

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### ***Reviews and Book Notices.***

A SYLLABUS OF MATERIA MEDICA, compiled by WARREN COLEMAN, M. D., Professor of Clinical Medicine and Instructor in Materia Medica in Cornell University Medical College; Assistant Visiting Physician to Bellevue Hospital; 12mo. cloth, pp. 186; 3rd. Edition. Price, \$1.00. Wm. Wood & Co., Publishers, New York, N. Y., 1906.

This little work is intended to aid the memory as much as possible by condensing the facts, grouping the drugs in various ways, and repeating the doses, to supplement the regular text-

books, but not to supplant them. The volume has been carefully revised, all errors eliminated, made to conform to the Eighth Decennial Revision of the Pharmacopoeia, and two new sections added upon Minor Toxic Action and Toxicology.

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GENITO-URINARY DISEASES AND SYPHILIS. By HENRY H. MORTON, M. D., Clinical Professor of Genito-Urinary Diseases in the Long Island College Hospital; Genito-Urinary Surgeon to the Long Island and Kings County Hospitals, and the Polhemus Memorial Clinic. Illustrated with 158 half-tone and photo-engravings and 7 full-page colored plates. Second edition, revised and enlarged. Royal octavo, 500 pages. Bound in extra cloth. Price, \$4.00, net. F. A. Davis Company, Publishers, 1914 - 16 Cherry Street, Philadelphia, Pa.

In this excellent volume the author presents in a concise form, the present status of Genito-Urinary Diseases and Syphilis; and also has endeavored to keep in mind the needs of the practitioner, whose opportunities of seeing such cases may be infrequent, considering the questions of diagnosis, prognosis, and treatment in such a way that the book may be of practical use.

In the past ten years great advances have been made in genito-urinary work; the treatment of acute and chronic gonorrhea especially has been removed from mere empiricism and placed upon a rational and scientific basis.

Dr. Morris has carefully revised the materials contained in his first edition, and in this — the second — has presented the subjects as they are understood at the present time.

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A TEXT-BOOK ON THE PRACTICE OF GYNECOLOGY. For Practitioners and Students.—By W. EASTERLY ASHTON, M. D., LL. D., Professor of Gynecology in the Medico-Chirurgical College of Philadelphia. Third edition, thoroughly revised. Octavo of 1,096 pages, with 1,057 original line drawings. Cloth, \$6.50, net; half morocco, \$7.50, net. W. B. Saunders Company, Philadelphia and London, 1906.

This we regard as one of the best — if not *the best* — works for the practitioner and student; and the fact that it has so soon reached its third edition evidences the high regard it has attained.

The author has fully considered both the medical and surgical aspects of gynecology, and has discussed each subject so far as

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possible upon the basis of his own experience. He has in each instance given that which in his own judgment is the best plan of treatment, and afterward described such variations as may be required in the management of atypical cases.

The illustrations, which are quite numerous, are all new line drawings, made under the author's personal supervision from actual apparatus, living models, dissections on the cadaver, and the operative measures of other authors. In many instances each step of the various methods of diagnosis and treatment, as well as the different operations are shown by separate drawings, greatly aiding in fully understanding the special details.<sup>1</sup>

In this edition the subject matter and illustrations are brought fully up-to-date, in order that the most advanced and sound teaching may be clearly described, and it represents the author's views at the present time, based upon actual working knowledge of the advances that have been made in gynecology and abdominal surgery. These changes and alterations have been quite extensive, and greatly increase the practical value of this most excellent work. The section on "Intestinal Anastomosis" has been entirely rewritten and Moynihan's methods have been substituted for those previously employed.

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**OBSTETRICS FOR NURSES.**—By JOSEPH B. DELEE, M. D., Professor of Obstetrics in the Northwestern University Medical School, Chicago. Second revised edition. 12mo of 510 pages, fully illustrated. Cloth, \$2.50, net. W. B. Saunders Company, Philadelphia and London, 1906.

Although Dr. DeLee prepared this little work for nurses, the medical student and young practitioner as well will find it of very material service. With eight years' experience in lecturing to the nurses of four different training schools, the author has brought out a very practical and useful volume. The illustrations, with which the text is very liberally provided, are mainly taken from photographs from actual occurrences and scenes.

In this second edition, notice has been taken of all criticisms by reviewers of the preceding edition, together with suggestions from hospital superintendents and experienced nurses. It also contains forty new original illustrations and forty-seven additional



pages of reading matter. It is by far the best work of its class that we have seen, and we can most cordially commend it.

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**THE AMERICAN ILLUSTRATED DICTIONARY.** All the terms used in medicine, surgery, dentistry, pharmacy, chemistry, and kindred branches; with over 100 new tables.—By W. A. NEWMAN DORLAND, M. D. Fourth revised edition. Octavo of 836 pages, with 293 illustrations, 119 of them in colors. Flexible morocco, \$4.50, net; thumb indexed, \$5.00, net. W. B. Saunders Company, Philadelphia and London, 1906.

Our readers all know what "Dorland's Dictionary" is, consequently it needs but little if any commendation at our hands. However, as showing briefly the special advantages of the latest—fourth—edition, we submit the following, from the preface:—

"The numerous additions to the vocabulary of medical science have made necessary a new edition of this book. Ever since the appearance of the last edition the editor has been engaged in a thorough revision of the text, and in making a careful search for the new words that are constantly appearing. As a result, the volume represents better than ever before the current state of medical science. Over 2,000 new words have been defined and numerous improvements made throughout the text; nearly every table has been considerably amplified. Moreover, the pictorial features have been considerably enhanced by the addition of six new colored plates, illustrating the subjects of Appendicitis, Diphtheria, Gall Stones, Leishman-Donovan Bodies, Measles, and Nephritis. The plate of Leishman-Donovan Bodies is copied from the original plate of Major Donovan, through the kind permission of the *Lancet*, London."

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**DIET IN HEALTH AND DISEASE.**—By JULIUS FRIEDENWALD, M. D., Clinical Professor of Diseases of the Stomach in the College of Physicians and Surgeons, Baltimore; and JOHN RUHRAH, M. D., Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Second revised edition. Octavo of 728 pages. Cloth, \$4.00, net; half morocco, \$5.00, net. W. B. Saunders Company, Philadelphia and London, 1906.

This work was prepared for the general practitioner, the hospital interne, and the medical student, as well as for a reference

hand-book for the training of nurses. It is eminently practical, and gives a reasonably concise but plain and easily understood account of the different kinds of foods, their composition and uses, and also sets forth the principles of diet in both health and disease; the greater part being devoted to the sick, the doctor is told just how to feed his patients. It shows a large amount of labor in consulting the literature of the subject, much of which is inaccessible to the general practitioner, who is here placed in possession of those views collected by the authors which they have considered to be the most useful.

As valuable as was the first edition, this is far more so, by reason of the numerous changes and additions. The section on salts has been enlarged and rewritten. Chittenden's work has been considered, a more extended account is given of Prochownick's diet in pregnancy complicated by contracted pelvis, and an account of the diet at water cures, as well as Klemperer's work on oxaluria is carefully brought out. A revised list of recipes and a new set of diet lists will be found at the end of the book.

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**DISEASES OF THE STOMACH.** A Text-Book for Practitioners and Students, By MAX EINHORN, M. D., Professor of Clinical Medicine in the N. Y. Post-Graduate Medical School and Hospital; Visiting Physician to the German Hospital; etc., etc. Fourth edition. 8vo. cloth, price \$3.50, pp. 559. Wm. Wood & Co., Publishers, 1906.

In ten years this most valuable work has reached its fourth edition, and has added greatly to the remarkable advances in the consideration of a most important class of diseases. The author from the first, has been most practical, and has paid especial attention to diet and treatment. While the original plan of the book has remained the same, the text has been thoroughly revised and many material additions made. Chapter 1 very fully considers the anatomy and physiology of the stomach; 2. Methods of Examination; 3. Diet; 4. Local Treatment; 5, 6, 7, and 8. Organic Diseases with Constant Lesions; 9, 10, and 11. Functional Diseases with Variable Lesions; 12. Abnormal Conditions with reference to the size, shape, and position of the Stomach; 13. Ner-

vous affections of the Stomach; and 14. Conditions of the Stomach in Diseases of other Organs.

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**THE TECHNIC OF OPERATIONS UPON THE INTESTINES AND STOMACH.**—By ALFRED H. GOULD, M. D., of Boston, Massachusetts. Octavo volume, containing 190 beautiful original illustrations, some of them in colors. Cloth, \$5.00, net; half morocco, \$6.00 net. W. B. Saunders Company, Philadelphia and London, 1906.

In this beautiful book, which is the result of three years of research by the author, are collected certain of the standard operations upon the intestines and stomach; no pretense being made of giving all of the methods in vogue, and many well known operations have been omitted to give more room for illustrating the methods which were chosen. It is believed, however, that a knowledge of the technic, here included, will enable the surgeon to meet practically all of the requirements of gastro-intestinal surgery.

The following subjects are very practically and instructively considered: 1. Repair of Intestinal Wounds; 2. Suture Material, Tying Knots, Needles, Sutures, and Clamps; 3. Anatomy of the Intestines; 4. Operations on the Intestines; 5. Operations on the Stomach.

In the preparation of the work all the latest and most progressive authorities have been carefully consulted; and personal communications from Drs. Finney, McGraw, W. J. Mayo, and Connell have contributed valuable opinions which are embodied in the text, where they are referred to in detail.

The publishers have left nothing undone, and have spared no efforts in making the text and illustrations most perfect and admirable specimens of the book-making art.

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**PREVALENT DISEASES OF THE EYE.**—By SAMUEL THEOBALD, M. D., Clinical Professor of Ophthalmology and Otology, Johns Hopkins University. Octavo of 551 pages, with 219 text-illustrations, and ten colored plates. Cloth, \$4.50, net; half morocco, \$5.50, net. W. B. Saunders Company, Philadelphia and London, 1906.

This is a clearly written, comprehensive work, which we can most heartily commend to general practitioners and students of

medicine, as containing the important points so greatly needed by them. With few exceptions all the works on diseases of the eye; although written ostensibly for the general practitioner, are in reality adapted only to the specialist; but Dr. Theobald in his book has described very clearly and in detail only those conditions, the diagnosis and treatment of which come within the province of the general practitioner. The therapeutic suggestions are concise, unequivocal, and specific, in every case only one course of definite treatment being given. Over 200 text-illustrations and several colored plates greatly aid in presenting the subject in a lucid and practical way. It is the one work on the Eye written peremptorily for the general practitioner.

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SAUNDERS' POCKET MEDICAL FORMULARY.—By WILLIAM M. POWELL, M. D., author of "Essentials of Diseases of Children;" Member of Philadelphia Pathologic Society. Containing 1,831 formulas from the best-known authorities. With an appendix containing: Posologic Tables, Formulas and Doses for Hypodermic Medication, Poisons and Their Antidotes, Diameters of the Female Pelvis and Fetal Head, Obstetric Table, Diet Lists, Materials and Drugs Used in Antiseptic Surgery, Treatment of Asphyxia from Drowning, Surgical Remembrancer, Tables of Incompatibles, Eruptive Fevers, etc., etc. Eighth edition, adapted to the new (1905) Pharmacopœia. In flexible morocco, with side index, wallet, and flap, \$1.75, net. W. B. Saunders Company, Philadelphia and London, 1906.

This edition has been carefully and fully revised, and made to accord with the eighth revision of the U. S. Pharmacopœia. Many obsolete formulæ have been omitted, and nearly five hundred new ones added, all culled from the best authorities, and embodying a large number of approved new remedies. The work is thoroughly practical and representative of the prevailing therapeutic methods.

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## *Selections.*

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SPECIALISM AS IT SOMETIMES IS.—We often hear it said that we live in a day of specialism in all lines of commercial and scientific activity, and in the abstract this appears to be an ideal state, but it is an unfortunate fact that the term "specialist" has, in med-

icine, no necessarily limiting or warranting signification. The problem of specialism would be simple indeed were specialists always men of special attainment in their special line, and did they confine their attention to the work to which they profess to limit themselves.

We have in mind a man recently arrived from the University of Vienna, but shortly graduated, who posed as a specialist, telling of special training to bear out his claim in gynecology, pathology, and bacteriology, surgery, urology, dermatology, and internal medicine, all within a few weeks, his line depending on his audience. He was getting his bearings when he found the line he thought the most promising in this community, he announced himself a specialist therein, but there is no indication that he confines himself to it. Graduates of American schools are less rash, for they know local conditions and appreciate that they cannot command so credulous an audience, but their real unpreparedness when they announce themselves as specialists is frequently quite as apparent. A four years spent in medical study does not prepare a man to launch himself as a specialist, such an one must spend years rounding himself out in general work and special post-graduate study before he is fit to be regarded as specially an authority in any branch. Speaking to this point the editor of the *Post-Graduate* says:—

“ We have always considered it an axiom that a man may be an excellent physician without knowing anything at all about surgery, but we believe just as firmly that no man can be a first class surgeon who is not a good physician. The reasons will easily appeal to any thinking man, but when we state the fact that there are a number of surgeons in our experience who are extremely skilful in surgery itself, and yet cannot grapple with the simplest medical complication in a case, we are not putting too high an estimate upon the necessity of the surgical practitioner keeping up his reading and observation, and, if he can do so, his experience in general medicine. When it comes to the narrow specialties of the eye, ear, throat, and so on, the same dictum holds, and the failure to attain the best results is often due, not to the lack of skill in the specialty, but to the lack of knowledge in general medicine.”

A knowledge of general medicine and the maintenance of a well-rounded medical character is essential to success in a specialist's work. We all know specialists who can see only their own little group of organs, and who view every obscure trouble as originating from some disorder within their province. Acute diagnostic acumen would frequently send cases to the internist or back to the general practitioner which are treated by the urologist. We too infrequently hear of a specialist returning a patient to the general practitioner, because he fails to find anything within his province; he does not fail, because to him every symptom points to his field, and he can see no other.

The real day of specialism will be the time when only those will aspire to this dignity who have drunk deep of learning, and who have a breadth of scientific horizon which brings within their vision the whole realm of medicine, even though they may not choose to tread all its devious and varied paths.

Such there are now, and it is to them that we look with gratitude for they keep the good word specialist from utter disrepute.  
— *Medical Fortnightly*.

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DIAGNOSIS OF GALLSTONES.—Gallstone cases almost give a precedent history of rebellious dyspepsia. In a patient presenting dyspeptic symptoms, not clearly due to some other condition, the suspicion of the presence of gallstones should, therefore, be early entertained. The presence of a tumor in the region of the gall bladder is by no means necessary to the diagnosis of cholelithiasis. The bladder may be filled with stones, and yet shrunken instead of distended. In the presence of an obstructive jaundice, at any rate, Courvoisier has pointed out that distention of the gall bladder is far more often due to malignant growth or to pressure upon the common duct than to gallstones.—*International Jour. of Surgery*.

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AFTER OPERATIONS FOR HEMORRHOIDS bleeding sometimes recurs after a time. This is not always attributable to the incomplete removal of the piles or the formation of others. It may be due to hemorrhoids which are seated high up above the sphincter and which often can only be discovered by rectoscopic examination.—*International Jour. of Surgery*.

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***Original Communications.***

**THE MORBID HISTOLOGY OF RENAL DISEASE.**

**BY HAZLE PADGETT, M. D., OF NASHVILLE, TENN.**

In this article I do not expect to add anything new to the subject of organic diseases of the kidneys. The shelves of our libraries are now groaning under the accumulated evidence of years past and my only excuse for presenting such a subject is its ever-present interest and importance, and having had the good fortune to examine and study two thousand kidneys and becoming early interested in the subject of renal disease and diagnosis, I wish to emphasize what has so often been said by some of my own work upon this important organ. The subject of course is one too great to attempt to cover at one time in all of its details, and I shall select the morbid changes found in some of the commoner

inflammations and other changes in the kidney. I shall make no effort to discuss the different ideas that have existed as to what constitutes Bright's disease, but will consider those conditions found in the kidney as morbid changes manifested by certain clinical signs and symptoms. The conditions in the kidney that concern us are acute and chronic hyperemia; acute and chronic degeneration; acute and chronic inflammation. The changes in acute hyperemia are identical with the first stage of an acute nephritis. The kidney is slightly enlarged; the Malpighian bodies are distended, and the cells in the stage of cloudy swelling. The causes of this are many, as in a sudden checking of perspiration, chilling of the skin surface; the kidney attempting to eliminate some irritant poison; severe injuries and blows over the region of the kidney; surgical operations upon the bladder, prostate, and urethra; and the removal of one kidney.

It has been generally thought and still believed that the kidneys throughout the course of acute infectious fevers, especially those lasting three and four weeks, are in a stage of acute hyperemia; but from my personal investigation I am seriously inclined to doubt the veracity of this statement. I know in the early stage, that is, in the first few days of an infectious fever, that the kidney is acutely congested, but later on in the course of the infection the organ is in an opposite condition. Chronic congestion of the kidney is usually produced by some cardiac disease, especially mitral regurgitation, chronic aortitis, emphysema, and large accumulations of fluid in the pleural cavity, and these conditions often lead to a chronic nephritis. In examining a kidney that is chronically congested, it is not always the case that the organ is enlarged, but often it is, and in proportion to its size it is very heavy, of hard consistence, dark red color, the pyramids are dark red while the cortex may be pale. The epithelial cells are normal in some cases, but often show cloudy swelling and degeneration and are detached. No change in the connective tissue unless there is a beginning interstitial nephritis, which is quite often the case. The capillaries of the Malpighian bodies are not always dilated, but often are so, and the cells that cover the capillaries are swollen. This condition I have practically



found in all cases of death from a lingering heart disease where the usual condition of obstructed circulation existed.

Acute degeneration, sometimes called acute parenchymatous degeneration, is a condition that exists more often than is suspected during life, and is an acute death of the cells of the Malpighian bodies and tubules. We find this condition in acute infectious diseases and in severe inflammations in other parts of the body and in poisoning by mercury, phosphorus, and arsenic. In speaking of the poison of infectious diseases let me specially mention scarlatina and diphtheria that are capable of producing both degeneration and inflammation. The gross appearance of the organ varies according to the intensity of the local infection. In mild or moderate cases the organ is a little swollen and with pale cortex, while in the severest cases the organ is considerably enlarged and the cortex is pale or congested.

Allow me to relate a case. I was called in consultation to see a patient with acute croupous pneumonia. The amount of lung involved was very small. Death occurred in the course of ten or twelve days and the post mortem revealed a correct diagnosis with the most interesting feature centering in the kidneys that were examined very early after death. The kidneys were found enlarged, somewhat congested, and very soft and mushy, breaking with the least handling. The tubal cells were swollen, very opaque and granular, with a complete destruction of nearly all cells that had become detached and completely destroyed, making only a mass of debris. The cells of the Malpighian bodies were the same. No extravasation of blood. No infiltration of white or red cells. The delicate connective tissue showing death with an opaque state of the blood vessels.

Of the acute inflammatory conditions we have acute exudation and acute, diffuse, or productive nephritis. Acute exudative nephritis is often called acute tubal or desquamative nephritis, and often occurs as a primary nephritis on exposure to cold or taking cold, and in some cases without a discoverable cause, and as we see it in scarlatina, diphtheria, influenza, pneumonia, typhoid fever, and tuberculosis, named in the order in which I have found it likely to occur. Nephritis does occur in typhoid fever, but unmis-

takable nephritis in typhoid fever is not so common, and yet albumen appears in nearly one half the cases. In the summer of 1898 I had a series of one hundred cases of typhoid fever, and while albumen, I mean a simple albuminuria, was manifested in a large per cent., and yet not in a single one did a clinical nephritis occur. In the summer and fall of 1906, during my term of service as a member of the Clinical Staff of the City Hospital, in a large number of cases of typhoid I only found one case of nephritis.

In typhoid fever we know that bacilli and other irritant substances are constantly passing through the kidney and with it all the organ is very tolerant. In very mild cases of exudative nephritis we find no decided changes in the organs after death, but in the severest cases the organs are enlarged and their surfaces are smooth; capsule non-adherent with a thickening of the cortical portion, have a mottled or white appearance, or the organ may be very much congested. If there is much infiltration of the stroma with serum, the organ is very soft, and if pus cells are very abundant white or yellow spots are found in the cortex. In these specimens we find microscopically the evidence of inflammation in the tubes, stroma, and glomeruli, with a more marked change in the cortex. The renal cells are often flattened, as we notice in chronic congestion of advanced cardiac disease, and is likely due to the inflammatory congestion and are swollen, degenerated, and detached. The tubes, no matter whether flattened or dilated, contain coagulated matter in irregular masses, with casts and red and white cells. In the glomeruli we find changes, as in inflammation of capillaries elsewhere.

The cavity of Bowman's capsule contains also coagulated matter, red and white cells, and the capsular cells are swollen as many times to resemble tubal cells. With all of these profound changes the tendency is for the patients to get well, and it reminds me very much of the histologic changes seen in croupous pneumonia. Whatever clinical relationship there is between acute exudative and acute diffuse or productive nephritis, there is a histologic difference. In the diffuse or the productive form we have what I have just described plus two additional features.

changes that are found in the earliest stages of the inflammation, and changes that stamp the disease quite characteristically: first, a growth of connective tissue, seen in its earliest stage as cells; and secondly, a growth of the capsular cells of the Malpighian bodies. The whole kidney is not involved, but strips and wedges that follow the arteries are seen, and in every portion of the connective tissue are seen thickened arteries and an enormous growth of cells in the Malpighian bodies, with a compression of the tufts.

This variety of nephritis is the most important of the acute inflammations of the kidney because of the extensive involvement and the permanent nature from the start; being the form seen in scarlatina and occurring early and late in diphtheria, and it is also seen in pregnancy. We are not always able to make clinically the kind of diagnosis that I have made from a gross and histologic study of the kidney, for there are many perplexing questions clinically to decide. A case of diffuse productive nephritis may be so mild that we think it a case of exudative nephritis until we discover evidences of a productive chronic nephritis. How often does a child or older person going through an attack of scarlatina, diphtheria, or some other infectious disease, getting up too early and by other imprudent acts, stamp the chronicity of the disease?

This picture exists in a number of cases where the medical man has overlooked the nephritis. We have several forms of chronic and progressive inflammation of the kidney that result in very definite changes, and while we find in both forms morbid changes, inflammation and degeneration forming the principal changes, and yet each type is so different from the other in its progress that it is difficult to think that they are at all related. These forms of chronic inflammation are known by many different names and each one is significant; but I shall refer to them as chronic parenchymatous and chronic interstitial nephritis. In chronic parenchymatous nephritis the organ is large and pale, so much so it bears the name of large white kidney. The capsule is non-adherent and is easily stripped. The thickness of the cortex is considerably increased, and is in fact the place that shows the greatest changes. There is a kidney that presents the

opposite of the above in size, called the small white kidney; in which often the organ is not enlarged, and may be smaller than normal; and it is not definitely determined whether the small white kidney is the late stage of the large white kidney or not. The epithelia in both forms are granular and fatty and desquamating, so much so that many of the tubules are stripped of all cells and having casts of various kinds.

In chronic interstitial nephritis the dominant change is in the connective tissue and blood vessels, with a secondary change in the cells of the tubes and tufts. There is a great infiltration of cells, small round cells and quite a plentiful supply of ovoid and spindle shaped cells. The capillaries of the Malpighian bodies are destroyed and converted into a mass of fibrous connective tissue. The capsule of Bowman is enormously thickened and the cavity obliterated. Nature does not always conform to the artificial division of man, and we must not forget the fact that she very often will make histologic combinations of both kinds just described. Chronic interstitial nephritis is primarily a connective tissue disease with secondary changes in the renal cells. The connective tissue is not evenly distributed, but often in wedges following the course of the blood vessels. The capsule is very adherent and when stripped kidney tissue comes with it. The organ contracts and becomes smaller and smaller, granular and nodular.

In discussing the subject of kidney disease one could hardly resist the temptation not to speak of albumen and tube casts in their relationship to kidney diseases. Both bear the same relationship to renal pathology and diagnosis as murmurs do to cardiac diseases. Up to just a few years ago when we began to learn more about the significance of albumen and casts the presence of either carried with it grave fears, but now we are more conservative. At one time not so far removed from the present, albumen was always thought to mean some form of Bright's disease. While the presence of albumen may not mean a permanent change in the excretory apparatus of the kidney, yet whenever albumen exists in the urine discovered by our usual tests, that condition is a pathologic one whether it lasts or not. I cannot imagine a

renal cell or blood vessel permitting enough albumen to pass its portals to manifest itself as such in the urine being in a normal condition. And after all such expressions as, cyclic, physiologic dietetic, and orthostatic carry very little knowledge with them. *Let us be very, very careful with the innocence we look upon a so-called simple albuminuria; and do not understand me as being a disbeliever, for such terms as the above explain nothing. The point I wish to make is the presence of an albuminuria always means an abnormality.*

Life insurance companies are in a good position to study the so-called simple albuminurias, and at the present time they are not satisfied as to their innocence. The kidney may excrete albumen for a number of years without any other evidence, general or local, of kidney disease, and then in the end the story of a nephritis is told. The physical or vital resistance of the kidney varies. Some kidneys under the same kind of a poison or irritant will respond much earlier than others, and how do we not know but that some kidneys, acted upon by some insidious poison or agent manifested by the presence of a supposed simple albuminuria, will not or could not go on to a decided organic change when the action of that agent is continuously kept up day by day and year by year? If that agent or instability of metabolism acting upon and residing in the renal cells passes away, then nature has an opportunity to restore the normal, and the reverse.

When the kidney resistance is quite high, but does excrete albumen, the result of some bio-chemic fault or irritant, and this condition kept up, it may be for years, then we are not surprised to find positive evidences of an organic disease of the kidney. It is surprising how well some people keep up and look when they have all urinary evidences of nephritis. I will relate a few illustrative cases of the different phases of the subject. A. C. died at 55. Was in perfect health as far as feelings and looks were concerned, but had a so-called simple albuminuria for ten years. Consulted many prominent clinicians in America, and was under the treatment of several European masters, and all that was ever found was what was called a simple albuminuria. When I was called in consultation, after he had carried his simple albuminuria

for ten years, I found that casts and renal cells had appeared in his urine and within one year the patient died of advanced tubal nephritis. C. A., age 27, told me while I was attending her for a mild attack of grip that her physician told her three years before her urine contained albumen and only albumen. At the time of her grippal infection she presented no evidence physically of a kidney disease. No increase in arterial pressure. Heart and arteries normal. Optic nerve, retina, and retinal vessels normal. No anemia. Gastro-intestinal tract, liver, spleen, and nervous system normal. I obtained several specimens of urine after her recovery and all possible grippal infection eliminated, and found in addition to her simple albuminuria of three years previous tube casts and renal cells, with a few pus cells. The person now has carried this condition for seven or eight years and presents absolutely no evil results so far as health and looks go.

In contrast to the above I will relate this case: C. Y., age 52, in perfect health, applied for life insurance. There were no abnormalities discovered till the urine revealed an albuminuria without other findings upon repeated examinations. Of course he could not get life insurance, and in eight months, without any other demonstrable change, he had a large cerebral hemorrhage in internal capsule. How often it is the case that people with what is called a simple albuminuria, and in the absence of all other evidence of renal and blood-vessel disease, will have cerebral hemorrhages! One of the most remarkable kidney cases I ever saw was a soldier in the regular United States Army. He was in good health and condition as far as looks and comfort were concerned. No demonstrable organic visceral disease till he began to complain of the classic symptoms of an acute cystitis. His physician was called, and as he only manifested symptoms of an acute cystitis, all treatment was directed to that organ, but without improvement, and patient gradually growing worse. I was called in consultation, and before specimens were able to be obtained the patient died, and the autopsy revealed all organs and tissues normal except the kidneys and bladder. Both kidneys were highly cystic, so much so that the left kidney was functionally useless. The right kidney, with the left, contained a stone of

medium size. The right kidney was tuberculous, prominently shown in the pelvis and the orifice of the ureter. There was also a calcerous infiltration of a portion of the pelvis, with a tuberculous ulcer. The bladder presented a large tuberculous ulcer with an accompanying adjacent inflammation. It is wonderfully interesting that a patient could carry such an extensive morbid condition without showing some constitutional manifestation, but that such is the case is proven every now and then by autopsies. There is so much to be said about tube casts and albumen and their proper interpretation that pages could be devoted to that subject alone, and as our knowledge and technique improve the time may come when these problems will be more easily settled.

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### NOTES ON THE TREATMENT OF SCIATICA.

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BY E. S. MCKEE, M. D., OF CINCINNATI, OHIO.

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THE first essential to the successful treatment of a case of sciatica, the hip gout of Pliny, is a thorough knowledge of the individual patient in hand. We should in the beginning of the treatment institute a most exhaustive physical examination, not only of the sciatic nerve, but also of the entire nervous system and the patient's whole body, family history, diseases, mode of living, place of living, business, and habits of life and diet. If the patient is a woman, especial attention should be given to a careful rectal and vaginal examination, for the disease in women is often due to pelvic tumor. One cannot know too much about his patient suffering from this obscure malady to assist him in the cure. Constitutional elimination and general therapeutic measures to relieve pain and promote sleep should first follow that best of all starters, a mercurial purge followed by a saline, which treatment should be instituted as soon as the diagnosis is positively settled and the causal relations made clear. Morphia should be used with extreme caution, owing to the danger of forming the habit. Rheumatic cases are usually benefited by the salicylates, syphilitic cases by the iodides, gouty cases by colchicum and the

salines. One of the best combinations of drugs in the acute stage is the following: Aspirin, gr. vi; phenacetine, gr. v; salicylate of quinine, gr. ii; codeinæ sulphatis, gr. 1-4 to 1-2. Having first cleaned out the bowels with calomel and salines, this, in powder or capsule, should be repeated every two or three hours.

*Injection Treatment.*—Hypodermics of very large doses of strychnine in the region of the painful part has cured cases which were rebellious to every other plan of treatment. Injections into the region of the nerve of atropine sulphate, 1-150 of a grain three times daily, also cocaine injections as near the nerve as possible, are frequently followed by success. Deep injections of alcohol—cocaine and alcohol-stovaine, 80 per cent. of alcohol and the incorporation of 0.01 of cocaine or stovaine. Relief is obtained in about 90 per cent. of cases in from two to four injections. Relapses, generally after the fourth or fifth month, occur in about one third of the cases, but yield readily after one or two injections. Beta eucaine, six ounces, in .8 per cent. salt solution, should be injected in the region of the sciatic notch. When a large weal appears under the skin the needle is pushed down till a jerking shows that a nerve has been touched, then 70 to 100 c.c. are rapidly injected. Functional and complete relief is almost instantaneous. In a portion of the cases only is a second injection necessary for complete cure. The hypodermic injection of sterilized air is conducted as follows: After sterilizing the region where the injection is to be made, a sterilized hypodermic needle is inserted under the skin, and as soon as one is sure that no blood vessel has been punctured a rubber tube is joined on to the needle and air from a rubber bag is injected by means of simple compression. To be quite safe it is well to place a glass tube with a little cotton in it between the needle and the bag. The injection should be stopped when the patient no longer complains of pain. A slight amount of massage should be used every day until crepitation disappears.

*The rest cure* of Weir Mitchell is beneficial in some cases, and the fixation of the limb in plaster of Paris is good treatment, especially in those cases where the vocation necessitates violent exercise of the lower extremities. Change of occupation is often nec-



essary from the sedentary to the active or vice versa. The sedentary person should sit on a soft cushion or an air cushion to protect the nerve from pressure or injury.

*Hydrotherapy* judiciously administered should always be given consideration. It has many cures to its credit. The wet pack administered at night is a very excellent means of relieving pain as well as for influencing favorably the neurotic process. For this purpose we may use the leg of a heavy pair of drawers dipped in water at  $65^{\circ}$  F., and placed in position like a stocking. A roller bandage is then applied so that the leg may be kept in perspiration all night. This is removed in the morning and followed by a warm water ablution and massage. Ten or twelve packs usually result in much improvement. The half combined bath in the subacute stage proves quite serviceable. Patient sits in a vapor bath which comes up to the waist line only. This, while it does not exhaust the patient as much as the full bath of vapor, allows a much higher temperature to be borne by the affected part.  $110^{\circ}$  can be tolerated for from ten to fifteen minutes. At the end of this time the patient sits in a bath heated to a temperature of  $95^{\circ}$  F. for eight minutes, and during the last three minutes a hot undercurrent douche at  $102^{\circ}$  to  $112^{\circ}$  F. is applied to the affected limb. The combined bath alternated with the natural swimming bath is of value. The internal bath by the ingestion of large quantities of water is well advised.

*Electricity.*—Static spray (positive) locally. The galvanic current should be applied to the nerve from four to eight minutes and should not exceed from three to five milliamperes. When the nerve substance has been involved, gentle muscular stimulation with the uninterrupted galvanic current keeps the structures in good nutrition and prevents atrophy. *Faradism.*—The apparent anodyne action of this current in sciatica is due to its alternating action on the muscular tissue and through the latter on the circulation. The blood supply is regenerated and the cry of the nerve for healthy blood is stilled. Painful applications of the faradic current are not proper.

*Surgical Treatment.*—In cases of long standing it is advisable to make an exploratory incision for the purpose of exposing

the nerve trunk, incising its sheath, and freeing it from surrounding adhesions. Some good results of nerve stretching are reported, and many bad. It is an operation which has not gained much commendation from the general medical mind. Myelitis has in a few cases followed this operation, and nerve stretching is contraindicated where neuritis is present. There is a substitute operation called bloodless nerve stretching in which the patient under ether, the thigh is forcibly flexed upon the pelvis and the leg extended at the knee and this position maintained for some minutes.

*Massage* along the course of the nerve, even though painful, is often of benefit by relieving the nerve of adhesions. In true neuritis massage is as a rule not beneficial. Massage, or what is better, mechanical vibration, is of value in the chronic stage where atrophy has commenced.

Cure is easier in the young than in the old, and in those of fair general health than in those suffering from the various serious chronic diseases. The more pronounced neurotic processes are not so amenable to treatment as the milder types, and one attack predisposes to another. The reason that some patients do not recover is that they are unable to pursue a persistent or systematic plan of treatment, and the physician, or more probably the physicians, who have the case in hand have not had opportunity, owing to the frequent changes, to sufficiently study the case. Otherwise the failure to cure must be due to the medical man not having studied his patient thoroughly enough and he having overlooked some point. The only thing for him to do is to commence at the beginning and do it all over and try to ascertain wherein he has failed, for he has failed somewhere. An exact diagnosis of the conditions is one of the first and last means of cure.

*Qui bene diagnoscit, bene curabit.*

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NOT PARTICULAR.—“Doctor, how can I ever repay you for your kindness to me!”

“Doesn't matter, old man. Check, money order. or cash.”  
—*Milwaukee Sentinel*.

## THE LIVER: ITS DISTINCTIVE FUNCTIONS.

BY C. H. TODD, M. D., OF OWENSBORO, KY.

IN contemplating the physical organism of man one cannot help being astonished at the intelligent arrangement of every organ and structure composing the same, and we are still more amazed by observing their physical functions, and the precise amount, quantity, gravity, and color of the physiological products and their relation in sustaining life processes, and in building up and sustaining the physiological circle.

Were I asked what I consider the *main spring* of the human organism I would say, the liver, with its wonderful physiological functions and the great intelligence expressed in its activities.

The liver — the great heat center — is the only organ that has a double circulation and a double function, and is fed by the portal vein, which is unlike any other blood vessel, in that it begins as a vein and ends as an artery.

The secretion of the liver is a seeming paradox: secreting (manufacturing) on the one hand a most bitter substance — bile. — and on the other a most sweet substance — sugar (glycogen).

Bile, mixing with the digestive pabulum in the small intestines, stops possible fermentation at once, in other words, has a cooling office upon the digested food, and thereby keeps it in such stable condition as to be absolutely non-irritating to the mucous membrane of the small intestines, and the orifices of the lymphatic absorbents.

This pabulum is carried on by the lymphatics to the great lymphatic (thoracic) duct, which empties into the subclavian veins and into the circulation, here to be converted by this, as yet, alchemic process, into living blood, which I consider to be a chemical action of resolution.

The sugar (glycogen) sets up a fermentation — a combustion — a chemical action in the blood, continuing or perpetuating itself to every cell and fiber of the physical organism, thereby maintaining an equable temperature (heat) through the arrangement and adjustment of the great sympathetic or ganglionic or organic

nervous system, and this is the reason why the liver is the great heat center of the body.

The study of physiology is at once potent and fascinating, and can never be satisfactorily comprehended without a thorough knowledge of the physical sciences and philosophy.

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## ***Records, Recollections and Reminiscences.***

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### ***SPECIAL NOTICE***

*The 17th Annual Re-Union of United Confederate Veterans will be held in Richmond, Va., May 30th, 31st, and June 1st, 2nd, and 3rd, prox., and the 10th Annual Meeting of the Association of Medical Officers of the Army and Navy of the Confederacy will be held at the same time and place. Dr. C. W. P. Brock, former Chief Surgeon of Kemper's Division, A. N. V., Chairman, with an able and energetic Committee of Arrangements consisting of former Medical Officers of the Confederate Service and younger members of the profession in the former Capital of the Confederacy earnestly hope that every surviving Confederate Medical Officer who possibly can will attend.*

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### ***Obituary.***

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DR. THOMAS M. WOODSON died at his home on East Main Street, Gallatin, Tenn., Tuesday afternoon, February 12, ult., at 1:20 o'clock.

For several years he had been physically incapacitated by an attack of paralysis, being forced to retire from the active practice of his profession.

His impairment, however, was physical, for he retained his mental vigor throughout all his sufferings, and his neighbors and

friends, who paid him regular visits during his long illness, enjoyed the great wealth of his experience and the richness of his attainments, which shone so brightly in his declining days.

Dr. Woodson was born in Sumner County, July 20, 1830, and was a son of Rev. Lewis Miller and Lucinda (Hanna) Woodson. The father was of Welsh descent, born in 1806, in Montgomery County.

In 1850 the deceased graduated in medicine at the University of Louisville. In 1854 - 55 he attended the Jefferson Medical College, Philadelphia. He practiced medicine at Bethpage until 1874, when he came to Gallatin, where he continued the practice until a few years ago.

Dr. Woodson stood high in his profession, and was prominent in public affairs. He was an earnest, sincere, and most honorable member of the medical profession, revered and esteemed by all. He took a keen interest in the advancement and improvement of the community, and especially was he interested in education.

July 18, 1855, he married Miss Amelia, daughter of Rev. Luke P. Allen, who survives him at the age of seventy-three years. The children who survive are Edward A. of Bethpage, John C. of Sideview, and Dr. L. Miller Woodson and Miss Tennessee Woodson of Gallatin.

Dr. Woodson was a consistent member of the Methodist Church. He was a member of King Solomon Lodge F. & A. M., since 1859, and was an eminent and esteemed member of the Tennessee State Medical Society. Ripe in years, rich in experience and the love of the community in which he lived, his death will be a loss indeed.

The local papers published tributes of respect by the "Board of Education" of Gallatin, of which he was the honored president for seventeen years, and his Masonic associates. The following tribute from one of his younger professional associates we take pleasure in reproducing from the *Gallatin Examiner-Tennessean* as an incentive to our younger professional confreres, and which we most heartily and sincerely endorse, having known Dr. Woodson for many years.

“ In the death of Dr. Thos. M. Woodson we recognize with keenest regret that the class of mankind of which he was peculiarly a type is rapidly passing away; he was a man absolutely without guile, deception or pretense; his life was an open book without interlining; his purity of thought and action so self evident, stands unchallenged by the most cynical and degraded critics; modest and unassuming in social and professional life — the personification of truth, honor, and loving faith in all that was good and worthy — the pure waters of his life flowed peacefully into the great main of human existence, unaffected and undiluted by the stormy passions that swept around him.

“ Though quiet he was observant of all passing events and deeply interested in whatever tended to the betterment of the world; his life was so correct that he had few enemies and they were not of his own making.

“ While he had a keen sense of the ridiculous he ever refrained from its exhibition, lest he should wound — knowing:—

‘ There’s many a word at random spoke  
There’s many a shaft at random sent,  
Found mark where the archer little meant.’

“ Though sensitive in the extreme to insult or neglect he suppressed all resentment, preferring to wrongfully suffer.

“ If Parthian arrows were in his quiver they never disgraced his bended bow; his life had nothing of the mercurial; good fortune, he accepted but was not jubilant; reverses he honestly measured but never fretted or moped. In the greatest sorrow of his life when the death angel crossed the threshold and dipped his sombre wings in the then noon-day sunshine of his humble home and left shadow instead, he bore it visibly but without murmur to the end, to return it in exchange for the light he loved and lost; this was Dr. Woodson’s social life.

“ His professional life was equally a model; twelve years of intimate association justifies the writer in declaring him the most useful and if not the best, the equal of any medical man in our commonwealth, being well informed in every branch of the healing art.

"While not a man of varied reading he was constant and untiring in application to medical literature; in this chosen field, his mind was a storehouse of practical knowledge which challenged admiration;—endowed with a memory for detail which never failed; he was able at all times to bring into play whatever had been stored away in forty years of actual experience; this coupled with painstaking methodical clinical examination made him a superior diagnostician; no snap diagnosis ever exposed him to censure or ridicule, but his extreme caution so commendable made him in the eyes of ignorance a man of indecision and timidity, as far from the truth as are the sundered poles, for when satisfied of the situation no one was more aggressive and bold in treatment of disease.

"In his early days Antiphlogistic medicine held the boards, and he never forgot his first love, though three decades of scientific research declared against it; when uncertainty warned, his mind reverted wistfully to the shades of Dudley, Bell, and Bartlett and more than once his hand sought the well worn lancet, and he stayed not his hand, because he felt the righteousness of his conviction.

"He was utterly devoid of that curse Jealousy, so disgraceful to our profession; he was a friend and instructor of the young physician and ever ready to extend the helping hand; he was a blessing to the poor and no deaf ear was turned to the appeal of the widow and the cry of the orphan; he was a household god in the hovel of poverty and so long as right and justice prevail thousands will bless and none curse the memory of Dr. Woodson, whose life was a blessing to the suffering world and whose memory should be revered for all time.

"This is a true pen picture of our friend, for whoever would write one fulsome word or express undue praise would be recreant to his trust and an insult to his memory."

X. B. HAYNIE,

*Gallatin, Tenn., Feb. 19, 1907.*

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## Selected Articles

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### THE MEDICAL LIFE OF OLIVER WENDELL HOLMES.\*

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BY J. H. MASON KNOX, JR., M. D.

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*(Reprint from Johns Hopkins Hospital Bulletin, February, 1907.)*

THE birth of Oliver Wendell Holmes into the medical world was hardly a spontaneous one, but was rather the result of a protracted labor and took place after a long period of uncertainty and doubt.

At the age of nineteen, when a junior at Harvard, he writes to his boyhood's friend, Phineas Barnes, that he is totally undecided what to study; "it will be law or physic, for I cannot say that I think the trade of authorship adapted to this meridian."

While at college Holmes showed in formation many of the convivial charms that so graced his later life. He was popular, the center of much of the social life of his class, and was often called upon at various society and class functions to exercise his ready rhyming pen in descriptive verse. He contributed several articles to the college magazine, the *Collegian*. It was here he suffered, as he said, his first attack of "author's lead poisoning."

His father, a clergyman of rather liberal views and latitude for that period seems to have interposed no serious objections to the moderate indulgence of his son's convivial proclivities.

His mother was Sarah Wendell, a sprightly and lovable woman, from whom Holmes inherited many of his genial traits.

He describes himself at college as a "plumeless biped of exactly five feet three inches when standing in a pair of substantial shoes, having eyes which I call blue." "I am rather lazy than otherwise, and certainly do not study as hard as I ought to. I am not dissipated and I am not sedate. I stood at the humble rank of 17th scholar." He graduated in June, 1829, in a class

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\* Much of the material for this sketch was obtained from the "Life and Letters of Oliver Wendell Holmes," edited by John T. Morse, Jr., 1896.



noted for its high character, and which then and for many years afterward made Holmes the center of their yearly reunions, which he often celebrated in verse.

After this came the well-known period of doubt as to his work. He studied law for a year, but never seems to have liked it. We find him writing in a few months to a friend: "I am sick at heart of this place (the law school) and at almost everything connected with it. I know not what the temple of the law may be to those who have entered it, but to me it seems very cold and cheerless about the threshold."

So after the first year he entered the Harvard Medical School September 30, 1830, at the age of twenty-one, and began the studies which brought him contentment and influenced all his later life. He writes to Barnes shortly after his "flop" to medicine: "I must announce to you the startling proposition that I have been a medical student for more than six months and am sitting with a stethoscope on my desk and the blood-stained implements of my profession about me. I know I might have made an indifferent lawyer: I think I may make a tolerable physician. I did not like the one, I do like the other, and so you must know that I have been going to the Massachusetts General Hospital and slicing and slivering carcasses of better men and women than I ever was or am like to be. It is a sin for a puny little fellow like me to mutilate one of your six-foot men as if he were a sheep, but '*vive la science*.'"

Little is recorded of Holmes' life at the medical school. Undoubtedly he soon came under the influence of that great clinician and teacher, Dr. James Jackson, who was Professor of the Theory and Practice of Medicine from 1812 - 1846, and whose son was but a little further on in his medical studies. Dr. Jackson had studied in England and knew the value of the wider experience at the European clinics, and it may well have been at his suggestion that Holmes decided to go abroad and continue his medical education in Paris, which at that time and for a quarter of a century afterward was the Mecca which all ambitious followers of the healing art sought to reach.

This French nursing converted the weak and underfed medical

infant, whose birth had been attended with so many fears, into a sturdy, self-reliant child, able to sit up and take the strong diet of the many clinics and to do some vigorous, independent thinking.

Holmes was associated with a distinguished group of American students, among whom may be mentioned Jackson and Bigelow, Hooper, Warren, Gerhardt, and Morse. They lived in the Latin Quarter and attended the lectures and demonstrations of such men as Louis and Andral, Dupuytren and Larrey, who were leading the medical world of their day.

Holmes reached Paris in April, 1833, and soon after was completely absorbed in his work. After a few months he writes: "I am more and more attached to the study of my profession and more and more determined to do what I can to give to my own country one citizen among others who has profited somewhat by the advantages offered him in Europe. The whole walls of the Ecole de Médecine are covered with notes of lectures, the greater part of them gratuitous. . . . The dissecting rooms are open and the lessons are ringing aloud through all the great hospitals."

He usually began the day at seven o'clock at the hospital of La Pitié, where he attended lectures and clinics until breakfast at about eleven, after which he studied until 5 P. M., when he often dined at some "café" with a company of his fellow students. He speaks approvingly of the tasteful viands and the pleasing wines, very different from the "crude joints, the massive puddings, the depressing pies, and the hard cider which marvelously nourished New England in its era of development."

The period spent by Holmes in Paris was part of an epoch or remarkable progress in the history of medicine. The short but brilliant researches of Bichat had shown the close relationship between symptoms of disease and definite anatomical conditions and had dissipated many of the philosophical and visionary theories which had been thought sufficient to explain the phenomena of illness.

Following this with the work of Corvisart and Laennec, came the introduction of accurate methods of diagnosis by percussion and auscultation and the insistence by Louis of the statistical

method of study; that deductions concerning a diseased state should be made only after carefully tabulating many similar conditions and not from a single instance.

This great teacher, who was just in his prime while Holmes was in Paris, was undoubtedly the most inspiring personality felt by the large group of American students. "Louis had," he writes, "in a rare degree the power of attracting youth, so that those who followed him among the beds of the hospitals became filled with an ardent ambition. He was the object of our reverence, I might almost say of idolatry; modest in the presence of nature, fearless in the face of authority, unwearied in the pursuit of truth, he was a man of whom any student might be happy and proud to claim as his teacher and friend." Holmes, apparently, was admitted, at least during his second year, to some degree of intimacy with Louis. He writes that he had constant access to two wards containing one hundred beds where he can examine patients and that on one occasion at least he had a "tete-a-tete dinner with his great teacher who intrusted to him the analysis of a work which he is going to make use of in a publication."

He became a member of the Society of Medical Observation, of which Louis was perpetual president and which was devoted to the discussion of important cases and the presentation of new work.

Other luminaries whose path he crossed during the precious time abroad he mentions, particularly in his delightful valedictory address to his class at the Harvard Medical School.

He did not have much to do with Andral, who, although then a young man, was rapidly rising in fame and overshadowing the passing greatness of Broussais, whose "theories of gastro-enteritis as the cause of disease ran over the field of medicine like flame over the grass of a prairie, and who was in those days like an old volcano which has pretty nearly used up its fire and brimstone but is still boiling and bubbling in its interior and now and then sends up a spurt of lava and a volley of pebbles."

Of the intrepid men who operated in Paris in those an-anesthetic days, Holmes recalled particularly Lisfranc, whom

he describes as a "great drawer of blood and hewer of members and who regretted the splendid guardsmen of the old Empire because they had such magnificent thighs to amputate."

Then there was the short, square, substantial man with iron-grey hair, ruddy face, and white apron. This was Baron Larry, Napoleon's favorite surgeon. He was still strong and sturdy; he adds, "few portraits remain printed in livelier colors on my memory." To go around the Hôtel des Invalides with Larry was to live over again the campaigns of Napoleon, to the last charge of the Red Lancers on the redder field of Waterloo."

He visited frequently l'Hôtel Dieu, where ruled and reigned the Master Surgeon of his day, the illustrious Baron Dupuytren. "No man disputed his reign, some envied his supremacy. He marched through the wards like a lessor kind of deity."

He mentions also the vivacious Ricord, whom he called the "Voltaire of Pelvic literature; a skeptic as to the morality of the race in general, who would have submitted Diana to treatment with his mineral specifics and ordered a course of blue pills for the vestal virgins."

His time was not spent altogether in work, for he speaks of quite a list of renowned actors and singers and dancers who contributed to his recreation. He delighted to roam about the streets of Paris at night in looking at the shops which he thinks "greatly superior to those of Boston." He took especial pleasure in hunting for old books on the walls of the "Quais" and at the small dealers. He was present at the dinner among the Americans on July 4, 1833, which was also graced by "that inextinguishable old gentleman, Lafayette."

He was in a dreadful state of anxiety lest he should have to come home after his first year. He seems to have been a considerable drain upon the resources of his good parents, as Holmes, although not extravagant, was not willing to live meanly. He was known as a good dresser. He would come home if he must, but he was "not willing to eat a dinner for twenty-five sous and drink sour wine at a cheap restaurant."

However, after several importunate letters he persuaded his father that a "boy is worth his manure as well as a potato

patch," and embarked on his second year's work with renewed energy.

In the spring of his second year, with a Swiss who had known successively Jackson and Bowditch, Holmes took a course in operative surgery at a morgue in connection with a large cemetery. "Here at 12 noon every day," he narrates, "you might have seen M. Bizot and myself, like the old gentlemen at market, choosing our day's provisions with the same epicurean nicety. We paid fifty sous apiece for our subject and before evening we had him cut into inch pieces." "In England and America," he says, in contrast, "one may dissect but rarely operate upon the subject."

Holmes spent the summers, after the close of the lectures, in travel. In 1834, with several companions, he visited the Rhine Provinces, the low countries, and England. In London he saw something of the hospitals, but was not weaned from Paris as the city of his choice.

In July, 1835, he packed his accumulated belongings, a select little professional library, a modest stock of instruments, two skeletons and some skulls, and in the autumn, after an extended tour in Switzerland and Italy, he returned home, landing in New York in December. I have dwelt, perhaps unduly, upon the foreign experiences of Dr. Holmes, but it seems to have exerted a controlling influence upon all his subsequent professional life.

He returned to America with high ideals, with well-developed powers, a large amount of professional knowledge and skill, a self-reliance, an independence of thought, and a store of pleasant and useful memories which formed a part of his life's equipment through all the succeeding years.

In 1836 he took his degree of Doctor of Medicine from Harvard University and immediately started to practice. He shortly joined the Massachusetts Medical Society. In actual practice he seems to have had only moderate success. It is doubtful if he ever cared much for the life of a general practitioner. And he admitted that he did not make any strenuous efforts to build up a practice. Probably he did not add many to his list of patients by publishing a book of youthful poems just a year after his return from Europe. He competed success-

fully for the Boylston Prize in 1836 and 1837, winning three out of the four prizes offered by writing dissertations on "Indigenous Intermittent Fever in New England," "Neuralgia," and "The Utility and Importance of Direct Oral Examination in Medical Practice." The first of these is still a medical classic. In it Dr. Holmes displayed his accurate historical sense and has gathered together all that is known of malaria, its distribution, symptoms, etc., in the early settlement of New England.

In 1838 he was appointed Professor of Anatomy and Physiology in Dartmouth College at Hanover, but resigned after a year or two. He was married in 1840 to Miss Amelia Lee Jackson, a niece of his old preceptor. Dr. Holmes, in addition to his writings, together with three friends, engaged in teaching at the Tremont Street Medical College, a kind of supplementary institution to the Harvard Medical School, and in association with Dr. Bigelow he edited the American edition of Marshall Hall's text-book on the Theory and Practice of Medicine.

In 1842 he published two lectures on "Homœopathy and Its Kindred Delusions." In them various senseless medical fads are playfully reviewed. The reader is introduced to the Royal Cure of the King's Evil, the Weapon Ointment, which was applied to the weapon producing the wound for its healing, the Tar Water Mania of Bishop Berkely, and the "metallic tractors" of Mr. Perkins. Homœopathy, which he had doubtless become familiar with in Paris, is discussed in no stinted language in the second lecture. The good doctor hated homœopathy with a whole-souled hatred. He spoke of it as a "pseudo science." He showed its inconsistencies and absurdities. The argument founded on its occasional good results would be just as applicable, he said, to the counterfeiter who gives base coin on the ground that a spurious dollar had often relieved a poor man's necessities.

The parallel which the homœopathists attempted to draw between the effects of their infinitesimal doses and the production of small-pox from minute quantities of animal vaccine he shatters with the suggestion that the mind advancing this argument could reason that "a pebble may produce a mountain because an acorn can become a forest, or that because a spark will burn down a city a mutton-chop will feed an army."

He refers to the absurdity of the original contention of Hahnemann, the founder of the cult, that seven eighths of all chronic diseases are the result of psora, a skin affection called the itch.

He points out that to show the axiom "Simila Similibus Curantur" (like is cured by like) to be the sole law of nature in therapeutics, it is necessary to establish that drugs are always capable of curing diseases most like their own symptoms and that remedies should be shown not to cure diseases when they do not produce symptoms resembling those presented in these diseases. Neither of these propositions has ever been established. He predicts that the "Semi-Homœopathist will gradually withdraw from the 'rotten half of his business and try to make the public forget his connection with it and the ultra-Homœopathists will either recant or embrace some new and equally extravagant doctrine; very few will stick to their colors and go down with their sinking ship."

Unquestionably Dr. Holmes' most important contribution to medicine was made in 1843, when he read before the Boston Society for Medical Improvement an essay on the Contagiousness of Puerperal Fever, this was published in the *New England Quarterly Journal of Medicine and Surgery* for April of that year. The journal soon ceased to be published and the essay can hardly be said to have been brought before the profession.

It must be recalled that this was long before the days when the nature of contagion was understood and several years before the extended researches of Semmelweis\* on the same subject. Holmes, in his original essay, which he republished unchanged twelve years later, marshals a startling number of cases of puerperal fever presumably carried to the mother by the attending physician or nurse. He points out clearly the probable connec-

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\*J. P. S. Semmelweis was born in 1818, and graduated in medicine in 1846. Shortly after this time he became interested in the study of child-bed fever. He probably considered it contagious as early as 1849, and defended his contentions in numerous personal letters, written between 1858 and 1860. His first formal publication on the subject, entitled, "Die Aetiologie der Begriff und die Prophylaxis des Kindbettfiebers," appeared in 1861.

tion between erysipelas and child-bed fever. His contention met with violent, almost contemptuous opposition from the leading obstetricians of the day, notably by Drs. Hodge and Meigs, of Philadelphia. The latter wrote in 1852: "I prefer to attribute these cases to accident or Providence, of which I can form a conception, than to a contagion of which I cannot form any clear idea;" and Hodge advises his students to "divest their minds of the overpowering dread that you can ever become the minister of evil, that you can ever convey in any possible manner a horrible virus so destructive in its effects and so mysterious in its operations as that attributed to puerperal fever."

In republishing the essay in 1855, Holmes makes an earnest plea to students for freedom from the trammels of authority, for individual judgment of facts. "Students," he says, "have naturally faith in their instructors, turning to them for truth and taking what they may choose to give them: babes in knowledge, not yet able to tell the breast from the bottle, pumping away for the milk of truth at all that offers, were it nothing better than a professor's shriveled forefinger."

The rules for the guidance of physicians in midwifery practice laid down by Holmes in 1843 need little revision to-day:—

"1. A physician holding himself in readiness to attend cases of midwifery should never take any active part in the post-mortem examination of cases of puerperal fever.

"2. If a physician is present at such autopsies, he should use thorough ablution, change every article of dress, and allow twenty-four hours or more to elapse before attending to any case of midwifery. It may be well to extend the same caution to cases of simple peritonitis.

"3. Similar precautions should be taken after the autopsy or surgical treatment of cases of erysipelas, if the physician is obliged to unite such offices with his obstetrical duties, which is in the highest degree inexpedient.

"4. On the occurrence of a single case of puerperal fever in his practice, the physician is bound to consider the next female he attends in labor, unless some weeks at least have elapsed, as in danger of being infected by him, and it is his duty to take every precaution to diminish her risk of disease and death.



"5. If within a short period two cases of puerperal fever happen close to each other, in the practice of the same physician, the disease not existing or prevailing in the neighborhood, he would do wisely to relinquish his obstetrical practice for at least one month, and endeavor to free himself by every available means from any noxious influence he may carry about with him.

"6. The occurrence of three or more closely connected cases, in the practice of one individual, no others existing in the neighborhood, and no other sufficient cause being alleged for the coincidence, is *prima facie* evidence that he is the vehicle of contagion.

"7. It is the duty of the physician to take every precaution that the disease shall not be introduced by nurses or other assistants, by making proper inquiries concerning them, and giving timely warning of every suspected source of danger.

"8. Whatever indulgence may be granted to those who have heretofore been the ignorant causes of so much misery, the time has come when the existence of a private pestilence in the sphere of a single physician should be looked upon, not as a misfortune, but a crime; and in the knowledge of such occurrences the duties of the practitioner to his profession should give way to his paramount obligations to society."

The earnestness of the writer, to whom hundreds of mothers owe their lives, is attested by the closing paragraphs of the original paper:—

"The woman about to become a mother, or with her new-born infant upon her bosom, should be the object of trembling care and sympathy wherever she bears her tender burden, or stretches her aching limbs. The very outcast of the streets has pity upon her sister in degradation, when the seal of promised maternity is impressed upon her. The remorseless vengeance of the law, brought down upon its victim by a machinery as sure as destiny, is arrested in its fall at a word which reveals her transient claim for mercy. The solemn prayer of the liturgy singles out her sorrows from the multiplied trials of life, to plead for her in the hour of peril. God forbid that any member of the profession to which she trusts her life, doubly precious at that eventful period, should hazard it negligently, unadvisedly, or selfishly!"

In the "Professor at the Breakfast Table," he said, "I held up to the professional public the damnable facts connected with the conveyance of poison from one young mother's chamber to another's, for doing which humble office I desire to be thankful that I ever lived, though nothing else good should ever come into my life."

Holmes' graceful pen was soon recognized and he was asked to lecture, much to his personal inconvenience, in the many towns about Boston. He kept up his interest in medical history and practice, however, and gave some instruction in the use of the microscope, which instrument he was among the first to use in this country. He had unusual mechanical skill and was interested in the adjustment of the lens almost as much as in the study of the specimen, although he did describe some cells at the ends of long bones in a paper which he read at a medical gathering in 1851. Later he invented a stereoscope for hand use, described as an exceedingly clever device, which if patented might have made him for those times a rich man.

In 1847, at the age of thirty-eight, Holmes was elected Professor of Anatomy and Physiology at Harvard Medical School, which position he held continuously for thirty-five years, although the Chair of Physiology was separated in 1871.

As a lecturer in anatomy Holmes became immediately popular. He knew his subject well and loved it, and was able to enliven his lectures with witty allusions which fixed the object in the students' memory. "Gentlemen," he said on one occasion, holding up a female pelvis, "this is the triumphal arch under which every candidate for immortality has to pass." Again, "These, gentlemen," pointing to the lower portion of the pelvic bones, "are the tuberosities of the ischia, on which man was designed to sit and survey the works of creation."

His lecture-room was in an old building and to reach it Holmes had to climb up a pair of dark, winding stairs, often, because of his asthma, with the help of the janitor.

He lectured five times a week during the session at one o'clock, after the students had had previously four weary hours of continuous talk. Holmes was the only one who could interest them during the last hour.

Dr. Chever, one of his demonstrators, thus vividly describes the scene, so familiar to his students, but strange to those who only knew Holmes as the writer of graceful English:—

"It nears one o'clock, and the close work in the demonstrator's room in the old Medical School in North Grove Street becomes even more hurried and eager as the lecture hour in anatomy approaches. Four hours of busy dissection have unveiled a portion of the human frame, insensate and stark, on the demonstrating table. Muscles, nerves, and blood-vessels unfold themselves in unvarying harmony if seeming disorder, and the 'subject' is nearly ready to illustrate the lecture. . . . The room is thick with tobacco smoke. The winter light, snowy and dull, enters through one tall window, bare of curtain, and falls upon a lead floor. The surroundings are singularly barren of ornament or beauty, and there is naught to inspire the intellect or the imagination, except the marvellous mechanism of the poor dead body, which lies dissected before us, like some complex and delicate machinery whose uses we seek to know.

"To such a scene enters the poet, the writer, the wit, (Oliver Wendell Holmes, and asks, 'What have you for me to-day?' and plunges, knife in hand, into the 'depths of his subject,' — a joke he might have uttered. Time flies, and a boisterous crowd of turbulent Bob Sawyers pours through the hall to his lecture-room, and begins a rhythmical stamping, one, two, three, and a shout, and pounding on his lecture-room doors. A rush takes place; some collapse, some are thrown headlong, and three hundred raw students precipitate themselves into a bare and comfortless amphitheatre. Meanwhile the professor has been running about, now as nimble as a cat, selecting plates, rummaging the dusty museums for specimens, arranging microscopes, and displaying bones. The subject is carried in on a board; no automatic appliances, no wheels with pneumatic tires, no elevators, no dumb-waiters in those days. The cadaver is decorously disposed on a revolving table in the small arena, and is always covered, at first, from curious eyes, by a clean, white sheet. Respect for poor humanity and admiration for God's divinest work is the first lesson and the uppermost in the poet-lecturer's mind. He enters.

and is greeted with a mighty shout and a stamp of applause. Then silence, and there begins a charming hour of description, analysis, simile, anecdote, harmless pun, which clothes the dry bones with poetic imagery, enlivens a hard and fatiguing day with humor, and brightens to the tired listener the details of a difficult though interesting study. We say tired listener because — will it be believed? — the student is now listening to his fifth consecutive lecture that day, beginning at nine o'clock and ending at two; no pause, no rest, no recovery for the dazed senses, which have tried to absorb *Materia Medica*, Chemistry, Practice, Obstetrics, and Anatomy, all in one morning, by five learned professors. One o'clock was always assigned to Dr. Holmes because he alone could hold his exhausted audience's attention.

"As a lecturer he was accurate, punctual, precise, unvarying in patience over detail, and though not an original anatomist in the sense of a discoverer, yet a most exact descriptive lecturer; while the wealth of illustration, comparison, and simile he used was unequalled. Hence his charm; you received information, and you were amused at the same time. He was always simple and rudimentary in his instruction. His flights of fancy never shot over his hearers' heads. 'Iteration and reiteration' was his favorite motto in teaching.

"And how he loved anatomy! as a mother her child. He was never tired, always fresh, always eager in learning and teaching it. In earnest himself, enthusiastic, and of a happy temperament, he shed the glow of his ardent spirit over his followers, and gave to me, his demonstrator and assistant for eight years, some of the most attractive and happy hours of my life."

Holmes took the liveliest interest in the Medical School. He was Dean from 1847 to 1853. He was always accessible to the students and ready to give them kindly counsel.

He never was a strict disciplinarian and confessed that when he examined a man who was to live on twenty-five cent fees he usually confined his questions to the biceps.

President Eliot said of Holmes at a congratulatory breakfast: "He was one of the most active and hard-working of our lecturers. I never knew any other mortal exhibit such enthusiasm

over an elegant dissection. Perhaps you think it is with the pen that Dr. Holmes is chiefly skilful. I assure you he is equally skilful with the scalpel and microscope. He knows every bone, muscle, artery, and nerve, and describes them with fascinating precision. 'Traces of his life work occur on every page of his writings.'

During Holmes' connection with the school there was a violent discussion in the faculty as to the advisability of admitting women students. He took no decided stand at the time, but later in an address made certain remarks which were probably his views on this interesting topic.

A short time afterward, when the smoke of this battle was lifting, if not quite all gone, at the opening of the new building of the Harvard Medical School, Dr. Holmes delivered an address, and Professor Dwight told the following anecdote:—

"On this occasion, after speaking in his most perfect style on woman as a nurse, with a pathos free from mawkishness which Dickens rarely reached, he [Holmes] concluded: 'I have always felt that this was rather the vocation of woman than general medical, and especially surgical, practice.' This was the signal for loud applause from the conservative side. When he could resume he went on: 'Yet I myself followed the course of lectures given by the young Madame Lachapelle in Paris, and if here and there an intrepid woman insists on taking by storm the fortress of medical education, I would have the gate flung open to her, as if it were that of the citadel of Orleans and she were Joan of Arc returning from the field of victory.' The enthusiasm which this sentiment called forth was so overwhelming, that those of us who had led the first applause felt, perhaps looked, rather foolish. I have since suspected that Dr. Holmes, who always knew his audience, had kept back the real climax to lure us to our destruction."

He said he was willing to teach women anatomy but not in the same classes or dissecting-rooms with men.

Few members of the profession have been so well versed in medical literature as was Dr. Holmes. He knew the worthies and their writings from Hippocrates down. He said on presenting his loved collection of one thousand volumes and many pamphlets

to the Boston Medical Library, an institution largely due to his name and influence, and of which he was president for thirteen years: "These books were very dear to me as they stood on my shelves. A twig from some one of my nerves ran to every one of them." A visitor at his home describes his joy when a copy of the original edition of Vesalius came from New York. He was fond of showing to agents for new anatomical books how superior were the illustrations in the works of some of the old writers.

When James Russell Lowell became the editor of the *Atlantic Monthly* in 1857 he persuaded Dr. Holmes to contribute. This resulted in the "Autocrat of the Breakfast Table," which immediately placed the author in the first rank of writers of sprightly English.

His literary prominence and the establishment at about the same time of the famous Saturday Club, which included among its members, Emerson, Hawthorne, Whittier, Longfellow, Lowell, and Motley, gradually absorbed more and more of Holmes' interest and time.

The demands upon his muse were incessant, but were for the most part complied with. Literature, however, never really weaned him from the science of medicine, although it put a conclusive end to his practice as a physician.

As the years went by Dr. Holmes was called upon to make many addresses on occasions before medical meetings and various classes of medical students. These addresses for the most part have been gathered together in his volume of *Medical Essays*. They show the richness of his scholarship and his familiarity with a great variety of scientific topics and with all his kindness and common sense.

He was a strong believer in expectant treatment, or at least in moderate and definite therapeutics, and in the self-limitation of disease as championed by Dr. James Jackson. "The traditional idea," he declares, "of always poisoning out disease as we smoke out vermin is now seeking its last refuge."

"Young man," he asks, "are you sure you cured your patient? if so, perhaps to-morrow you may kill — but then you say the patient died."

"From the time of Hippocrates," he adds, "to that of our own medical patriarch there has been an apostolic succession of wise and good practitioners who place before all remedies the proper conduct of the patient."

The assertion in a lecture on Scholastic and Bedside Teaching delivered in 1867, that the most essential part of a student's instruction is obtained not in the lecture-room but at the bedside, sounds strangely familiar, and comes with good grace from a lifelong lecturer.

His address on "The Young Practitioner," delivered to the class leaving Bellevue in 1871, deserves to be repeated each year to the graduates of all our medical colleges.

The influence of his professional training was exerted not only in these dissertations but permeated every page he penned. He wrote, he asserted, "medicated novels" and medical terms are frequent in his writings.

"A laugh at an entertainment," he says, "broke out prematurely. It was a sporadic laugh and did not become epidemic."

His interest in psychological problems in the power of heredity and its effect on moral responsibility, appear in many of his works.

The Scriptural limit of three score years and ten Dr. Holmes vivifies in these familiar words:—

"Our brains are seventy year clocks. The Angel of Life winds them up once for all, then closes the case and gives the key to the Angel of Resurrection. Tic tac! tic tac! go the wheels of thought; our will cannot stop them; they cannot stop themselves; sleep cannot still them; madness only makes them go faster; death alone can break into the case, and, seizing the ever-swinging pendulum, which we call the heart, silence at last the clicking of the terrible escapement we have carried so long beneath our wrinkled foreheads."

Oliver Wendell Holmes stood as a constant protest against the depicting of gross and suggestive quasi-medical scenes in literature. He said that when "Zola and his tribe crossed the borders of science into its infested regions, leaving behind them the reserve and delicacy which the genuine scientific observer

"We have delayed sending out this notice and request until this time, for when sent early it is often laid aside and forgotten.

"Your Committee on Scientific Work will attempt to arrange the subjects so as to get the very best results for the meeting, and to this end we ask the earnest co-operation of every member, and especially urge you to respond as soon as possible to this communication, so that we can issue a preliminary program. Now is the time to act and we hope to have a prompt response.

Yours very truly,

GEO. H. PRICE, *Secretary*.

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### EXAMINATION FOR ASSISTANT SURGEON IN THE PUBLIC HEALTH AND MARINE HOSPITAL SERVICE.

A CIRCULAR issued by the Bureau of Public Health and Marine-Hospital Service contains the following:—

"A board of officers will be convened to meet at the Bureau of Public Health and Marine-Hospital Service, 3 B Street SE., Washington, D. C., Monday, April 15, 1907, at 10 o'clock A. M., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health and Marine-Hospital Service.

"Candidates must be between twenty-two and thirty years of age, graduates of a reputable medical college, and must furnish testimonials from responsible persons as to their professional and moral character.

"The following is the usual order of the examinations: 1, physical; 2, oral; 3, written; 4, clinical.

"In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate.

"The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery, and hygiene.

"The oral examination includes subjects of preliminary education, history, literature, and natural sciences.

"The clinical examination is conducted at a hospital, and when practicable, candidates are required to perform surgical operations on a cadaver.

"Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur.

"Upon appointment the young officers are, as a rule, first assigned to duty at one of the large hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco.

"After five years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon.



"Promotion to the grade of surgeon is made according to seniority, and after due examination as vacancies occur in that grade.

"Assistant surgeons receive \$1,600, passed assistant surgeons \$2,000, and surgeons \$2,500 a year. When quarters are not provided, commutation at the rate of thirty, forty, and fifty dollars a month, according to grade, is allowed.

"All grades above that of assistant surgeon receive longevity pay, ten per cent. in addition to the regular salary for every five years' service up to forty per cent. after twenty years' service.

"The tenure of office is permanent. Officers traveling under orders are allowed actual expenses.

"For further information, or for invitation to appear before the board of examiners, address, Surgeon-General, Public Health and Marine-Hospital Service, Washington, D. C."

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#### PRIZE ESSAY.

At the last meeting of the Mississippi Valley Medical Association it was decided to offer a prize of \$100 for the best essay on some medical or surgical subject.

The competition is to be limited to those who, at the time of entering the competition as well as at the time of the award, shall be members in good standing of the Mississippi Valley Medical Association.

The award will be made by a committee appointed for the purpose, consisting of Drs. Hugh T. Patrick of Chicago, A. H. Cordier of Kansas City, and Chas. H. Hughes of St. Louis. The name of the author is to be enclosed in a sealed envelope bearing some motto or device and the essay is to be marked by the same motto or device. The name of the successful author and the title of his essay will be announced at the next meeting of the Association to be held in Columbus, Ohio, October 8, 9, and 10, 1907, and the award will be made at that time. The successful essayist will be notified at least two weeks prior to the meeting, and he will be expected to read his essay at that meeting. The essay is to be published in the organ of the Association.

All essays must be typewritten, and are to be sent to the Secretary, Dr. Henry Enos Tuley, 111 W. Kentucky Street, Louisville, Ky., on or before August 1, 1907, after which date no essay will be received.

The Committee reserves the right to reject any or all essays.

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AN EFFICIENT MEANS OF RELIEVING PAIN.—The pain which accompanies the intestinal diseases resulting from grippe colds is often severe and requires the use of an effective anodyne. Papine is peculiarly adapted

to such needs, as it represents all of the pain-relieving properties of opium without its narcotic and nauseating effects. It is apparent that such a remedy has a wide range of usefulness, and that Papine is well appreciated by the medical profession is shown by the place it has occupied in the medical armamentarium for so many years.—*The International Journal of Surgery*.

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THINGS GOOD AND BAD.—Dr. Uriel S. Boone, formerly Professor of Pharmacology and Surgery, College of Physicians and Surgeons, St. Louis, says: "There is *one thing bad* about the grippe. Its victims, instead of being rendered immune by the first attack, seem to become more liable to its recurrence. There is one disconcerting feature about it. Its symptoms resemble those of so many far more serious maladies. This country is full of people who are going about darkly ruminating, because of evidences of heart trouble, nervous prostration, dyspepsia, liver complaint and old age, 'together with a plentiful lack of wit and weak hams.'

"There is *one thing good* about the grippe. It yields rather readily to the 'Antikamnia & Quinine' Tablet treatment. This remedy given in one or two tablet doses, every three hours, with plenty of rest in bed, and among pleasant and quiet surroundings, will work wonders.

"If suffering from nervous headache, nervous exhaustion, general nervousness, muscular aches, irritability, or insomnia, administer one 'Antikamnia & Codeine Tablet' three or four times a day at regular intervals. Nothing equals this remedy in relieving the organic pains of women, and this without unpleasant after effect. In these particular cases, prescribe one tablet every hour until three are taken."

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WE call the attention of our readers to the advertisement of the Robinson-Pettet Co., Louisville, Ky., which will be found on another page of this issue. This house was established fifty years ago, and enjoys a widespread reputation as manufacturers of high character. We do not hesitate to indorse their preparations as being all they claim for them.

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STONE RIDGE, N. Y., Nov. 27, 1906.

*The Anasarcin Chemical Co., Winchester, Tenn.*

THE sample "Anasarcin" you so kindly sent me I used upon the following case: P. J., male, merchant, age 65; heart dropsy; limbs swollen to knees very badly; compelled to bandage them; very short of breath; could not lie down; what little sleep he obtained was had sitting in chair. His family gave up all hope of his recovery. On the morning of the 8th of November commenced "Anasarcin," three tablets a day and every other day a tablespoonful of sulphate magnesia. On the 18th of November discontinued my visits as the swelling had entirely disappeared; he could

sleep in bed with comfort; appetite good and patient in excellent spirits. I advised him to continue one tablet of the medicine before each meal three times a day for a few days. To-day he is attending to his business as usual and continues in fair health. Prior to using Anasarcin I had about exhausted the list recommended in such cases and given up hope of the patient's recovery.

Very truly yours,

HERMAN CRAFT, M. D.

P. S.—You may make use of this letter if you desire. H. C.

**A STERILE EYE BATH**—An eye bath fashioned from a single piece of aluminum has been introduced by the Kress & Owen Company. That this little device will be well received by the medical profession is not to

### GLYCO-THYMOLINE

be questioned when one considers the many points of advantage this metal cup has over the old style glass contrivance. It is clearly, unbreakable, and can be sterilized instantly by dropping into boiling water. The surgical bag in the future will hardly be complete without one of these cups, which will give happy results in many an emergency. It will be found invaluable for treating ophthalmia, conjunctivitis, eye strain, ulceration, and all inflammatory conditions affecting the eye.

### EYE BATH

*Directions.*—Drop into the eye bath ten to thirty drops of Glyco-Thymoline, fill with warm water; holding the head forward, place the filled eye bath over the eye, then open and close the eye frequently in the Glyco-Thymoline solution.

No pain or discomfort follows the use of Glyco-Thymoline. It is soothing, non-irritating, and reduces inflammation rapidly.

**LEUCORRHEA** exists, or has at one time, in fully fifty per cent of our women. Wealth and splendor possess no bar to its entrance, it attacks rich and poor alike. The woman of leisure is even more apt to be afflicted with it than her humble domestic, but all, in their characteristic manner, in a measure endeavor to keep the fact from their attending physician. As said, however, this condition seems to be undergoing a change, and these cases are daily becoming more frequent to the family physician. Dr. J. D. Albright says: "One of the most troublesome cases I was ever called upon to treat was one of ever and recurring liability to faint, in a lady who formerly had an attack of endometritis, which had been entirely cured, but which left a stubborn leucorrhoea in its wake. The curing of this latter trouble has made my patient strong, and entirely removed the fainting tendency. In a severe case of the combination of these two affections, after I had exhausted almost the entire materia medica, without more than temporary relief, I found an excellent remedy in Tyree's

Antiseptic Powder, which gave immediate relief, and resulted in permanent cure. A trial package will be mailed free of charge to physicians if they will send their name and address to Mr. J. S. Tyree, Chemist, Washington, D. C.

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INCREASE OF BLOOD PRESSURE THROUGH COCA.—S. A. W., Guthrie, Oklahoma.—What application has the action of Coca in raising the blood pressure to the treatment of circulatory troubles?

The blood pressure is chiefly raised by the increase of force, or rate, of the heart beat, or by a decrease of the width of the small blood vessels, or from both causes, which may commonly be present in a condition of disease. Coca acts directly on the muscle of the heart to strengthen it, and also on the muscles of the arteriole walls, narrowing them for the blood stream. In addition to these actions on the muscular system, it acts on the nervous mechanism of the circulation centrally, directly and reflexly through the sensory nerves.

In anemia, where the blood pressure is low and the ventricular contractions rapid because they have little resistance to overcome, there is a short, quick apex beat. Increase the blood pressure by Coca—employing The Mariani or Vin Mariani as may be indicated—and this condition will materially change, as shown by improvement in the pulse and in the heart sounds. Meantime the general nutrition is brought up to a point which will clinch the progress that has been made and your patient will be greatly benefited.

Another advantage of Coca in circulatory troubles has been pointed out by Dr. Alexander Haig, of London, who has explained that waste products in the blood stream interfere with a proper metabolism, and this contamination may be quickly driven out with Coca, thus making the world look brighter: "When the blood stream is free the pulse tension is reduced, the rate is quickened, and the increased flow alters the mental condition as if by magic." — *The Coca Leaf*, November, 1905.

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CEREUS GRANDIFLORA has been in general use for many years and is undoubtedly a heart tonic stimulant of importance. Its best preparation, Cactina Pillets, has been successfully used by all schools of the medical profession for fifteen years.

Cactina Pillets regulates the heart and quiets nervous irritability. It is used when the heart is weak during convalescence and in the debilitated heart of old age. It is a reliable agent where the heart muscle is enfeebled and where there is progressive valvular inefficiency, with irregular or intermittent pulse. It is also indicated in mitral or aortic regurgitation on account of its power to shorten the diastolic period but is contraindicated in mitral stenosis, where digitalis is to be preferred to prolong diastole.

Cactina Pillets is a true nerve tonic and restorative. It improves the nutrition of the brain by improving the circulation in that organ.

In the cardiac weakness following severe prostrating diseases, such as pneumonia and typhoid it is a most trustworthy and safe cardiac tonic.

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"LIQUOZONE barred from registration in U. S. Patent Office as unlawfully interfering with the trade mark 'Glycozone.' — Notice is hereby given that in a proceeding in the United States Patent Office, which is entitled 'The Drevet Manufacturing Company vs. The Liquozone Company,' the name 'Liquozone' was barred from registration in the U. S. Patent Office as unlawfully interfering with the trade mark 'Glycozone.'

"The individual or corporation in any way infringing upon the trade mark 'Glycozone,' which is a legal trade mark (Glycozone being a thoroughly scientific and legitimate preparation for the treatment of germicidal diseases, etc.) and duly registered under the new trade mark law, or selling of any merchandise labeled with any mark or name infringing upon the trade mark 'Glycozone' or in any manner resembling the same, will be prosecuted for damages to the full extent of the law."

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A WELL-KNOWN Philadelphia rector, having a parishioner of great fluency of speech and also somewhat addicted to profanity, considered it his duty to talk to the man about his fault. The man listened for a while respectfully, and then replied seriously: "I know it is a bad habit, but, you see, my words flow so rapidly that I have to throw in a 'dam' now and then to prevent a flood." — *February Lippincott's*

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NEW ORLEANS POLYCLINIC—*Post-Graduate Department of Tulane Medical College.*—The twentieth annual session opened November 5, 1906, and closes May 18, 1907. This school is intended for practitioners only. All instruction aims to be *clinical* and *practical*, and to this end, use will be made of the vast facilities offered at the great Charity Hospital, at the Eye, Ear, Nose, and Throat Hospital, and at the Special Clinics to be held at the Polyclinic.

Physicians in the interior, who, by reason of their isolation, have been deprived of all hospital facilities, will find the Polyclinic an excellent means for posting themselves upon the status of the science of medicine and surgery of the day.

Those desirous of perfecting themselves in any special department or of becoming familiar with the use of any of the allied branches, such as Electricity or Microscopy, will be afforded every facility.

For information address NEW ORLEANS POLYCLINIC, P. O. Box 797, New Orleans, La.

## *Reviews and Book Notices.*

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THE AMERICAN PRACTICE OF SURGERY. A Complete System by Representative Surgeons of the United States and Canada.—Edited by JOSEPH D. BRYANT, M. D., and ALBERT H. BUCK, M. D., of New York City. Royal 8vo, cloth, Vol. II., pp. 778. Price per volume, in cloth, \$7.00; leather, \$8.00; morocco, \$9.00. Wm. Wood & Co., Publishers, New York, 1907.

The Second Volume of the series of eight has just been received, and it is fully up to the remarkably handsome and excellent standard set by the first volume. The other volumes will appear in succession of about three months or less.

This volume beginning with Part VI., has a most excellent series of articles on certain surgical diseases observed in parts of the United States and Canada, by Jas. Farquharson Leys, M. D., Surgeon U. S. N., and includes Leprosy, Plague, Glanders, Anthrax, Actinomycosis, Mycetoma, Rhino-Pharyngitis Mutilans, and Scurvy, with special consideration of Diagnosis and Surgical Treatment.

In Part VII. Surgical Tuberculosis is considered by Dr. V. P. Gibney of New York; and Syphilis by Edward L. Keyes, M. D., of New York.

Part VIII. Abscess by August P. Jonah, M. D., of Omaha, Neb.; Ulcer and Ulceration by W. McD. Mastin, M. D., of Mobile, Ala.; Gangrene and Gangrenous Diseases by Alfred C. Wood, M. D., of Philadelphia; Surgical Diseases of the Skin, by D. W. Montgomery, M. D., of San Francisco; Muscles, Tendons, Bursae, Fascia, and Connective Tissue by J. Clark Stewart, M. D., of Minneapolis; Surgical Diseases and Wounds of Nerves by DeForrest Willard, M. D., of Philadelphia; and Surgical Diseases of the Lymphatics by Chas. N. Dowd, of New York, are the special subjects.

Part IX. comprises Surgical Diseases due to Intense Heat and Cold, and by the Electric Current by Benj. F. Tilton, M. D., of New York; and Paul M. Pilcher, M. D., of Brooklyn.

In Part X. Asst. Surgeon U. S. A., Dr. Carl R. Darnall con-

siders Wounds of Soft Parts by Cutting and Piercing Instruments; and Gun-Shot Wounds by Major Wm. C. Borden, M. D., also of the Army. A very copious index concludes the volume.

The large number of handsome illustrations by chromo-lithographic, photogravure and other plates, half-tone and line engravings, the very beautiful paper and presswork, together with full, complete, and comprehensive articles by exclusively American authors make this a most valuable work. We regret that our space prevents a more extended notice, however, this very brief abstract is in itself ample guarantee of the rich store of information contained in the work.

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ATLAS AND TEXT-BOOK OF HUMAN ANATOMY.—Volume II. By Professor J. SOBOTTA, of Wurzburg. Edited, with additions, by J. PLAYFAIR McMURRICH, A. M., Ph. D., Professor of Anatomy at the University of Michigan, Ann Arbor. Quarto volume of 194 pages, containing 214 illustrations, mostly all in colors. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, \$6.00 net; Half Morocco, \$7.00 net.

The great advantage of this over other similar works lies in the large number of magnificent lithographic plates which it contains, without question the best that have ever been produced in this field. The text-illustrations, both the black-and-white and those in colors, are also accurate and beautiful reproductions of the various anatomic parts represented. The clear but concise style of Professor Sobotta makes this work an ideal text-book for the student, and an invaluable aid to the physician, surgeon, and anatomist. Indeed, special care has been taken to render the work practical in every respect. Dr. McMurrich's editorial additions and interpolations lend considerably toward the attainment of this end.

The second volume of this beautiful and handsome Atlas is the immediate continuation of the first volume, and treats of the Viscera and the Heart. Photography has been made the basis for all the original drawings and has been uniformly utilized for the general lines of the illustrations. The publishers have been unsparing in both effort and expense to insure the greatest excellence of these illustrations.

A TEXT-BOOK UPON THE PATHOGENIC BACTERIA.—For students of Medicine and Physicians. By JOSEPH MCFARLAND, M. D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia. New (5) Edition. Octavo volume of 644 pages, fully illustrated, a number in colors. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, \$3.50 net.

We have most heartily commended the previous editions of this valuable text-book, and its fifth, thoroughly revised edition only the more justifies us in our commendation. In this edition the entire work has been thoroughly revised, old matter eliminated, much new matter inserted, and the subjects treated brought up to date. The chapters upon Infection and Immunity have been greatly extended by the addition of the many new facts recently added to our knowledge.

The original plan of limiting the work strictly to the pathogenic bacteria has been maintained. The illustrations are mainly reproductions of the best the world affords, and being taken from the great standards, are considered by the author as superior to anything now covering the same ground.

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SYLLABUS OF LECTURES ON HUMAN EMBRYOLOGY.—An introduction to the study of Obstetrics and Gynecology for Medical Students and Practitioners; with a Glossary of Embryological Terms. By WALTER PORTER MANTON, M. D., Professor of Clinical Gynecology and Professor Adjunct of Obstetrics in the Detroit College of Medicine; Fellow of the Zoölogical Society of London, of the Michigan Academy of Sciences, etc., etc. Third Edition. Revised and Enlarged. Illustrated with a colored frontispiece and numerous outline drawings. 12mo, 136 pages; Interleaved throughout for adding notes. Bound in Extra Cloth. Price, \$1.25, net. F. A. Davis Company, 1914-16 Cherry Street, Philadelphia, Pa.

While this work is specially designed for, and will be found particularly useful to students in their first and second years at college and is likewise a desirable manual for review and reference for the general practitioner, it is not intended to take the place of the exhaustive text-books on embryology, but is primarily for use in the class room supplementary to the lecture and for laboratory guidance. It can also be used for self-instruction and in laboratory work in connection with the usual text-books.



THE ELEMENTS OF THE SCIENCE OF NUTRITION.—By GRAHAM LUSK, Ph. D., M. A., F. R. S. (Edin.), Professor of Physiology at the University and Bellevue Hospital Medical College, New York City. Octavo of 326 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, \$2.50 net.

In this excellent work Dr. Lusk presents the scientific basis on which rests our knowledge of nutrition and metabolism in health and disease; and also submits the proof to substantiate his statements. The work is eminently practical, the author having had wide and varied experiences in physiological research.

With a correct knowledge of the metabolism of proteids, fats, and the carbo-hydrates ingested, the physician is supplied with a sound basis for prescribing a proper regimen and dietary. The nutritive essentials in pregnancy, lactation, during growth, etc., are all clearly and practically considered, making this a most valuable aid to the practitioner of medicine.

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A TEXT-BOOK OF PATHOLOGY.—By ALFRED STENGEL, M. D., Professor of Clinical Medicine in the University of Pennsylvania. Fifth Revised Edition. Octavo of 977 pages, with 399 text-illustrations, many in colors, and 7 full-page colored plates. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, \$5.00 net; Half Morocco, \$6.00 net.

The favorable reception of previous editions has convinced the author that his purpose of supplying a moderate-sized book on clinical pathology has found favor with the profession. In this edition the section dealing with General Pathology has been most extensively revised, several of the important chapters having been practically rewritten. A practical addition is an Appendix treating of the technic of pathologic methods, giving the most important methods at present in use. The work will be found to present the latest knowledge on Pathology.

William H. Welch, M. D., Professor of Pathology, Johns Hopkins University, says of it: "I consider the work abreast of modern pathology, and useful to both students and practitioners. It presents in a concise and well-considered form the essential facts of general and special pathologic anatomy, with more than usual emphasis upon pathologic physiology."

A MANUAL OF NORMAL HISTOLOGY AND ORGANOGRAPHY.—By CHARLES HILL, Ph. D., M. D., Assistant Professor of Histology and Embryology, Northwestern University Medical School, Chicago. 12mo volume of 463 pages, with 312 illustrations. Philadelphia and London: W. B. Saunders Company, 1906. Flexible leather, \$2.00 net.

This manual is written in the interests of elementary students, and the fundamental facts in histology have been presented in a remarkably clear and concise manner, only such theories having been advanced as will simplify the text and aid the memory. The illustrations very satisfactorily elucidate the text in its most salient points. Dr. Hill is an ardent advocate of laboratory work, and has furnished a most excellent basis on which to build and complete an ideal elementary course in histology. The author's fifteen years of experience make his work quite authoritative on the subjects of histology and organography.

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A MANUAL OF PATHOLOGY.—By GUTHRIE McCONNELL, M. D., Pathologist to the St Louis Skin and Cancer Hospital and to St. Luke's Hospital, St. Louis, Missouri. 12mo of 523 pages, illustrated. Philadelphia and London. W. B. Saunders Company, 1906. Flexible leather, \$2.50 net.

Dr. McConnell's manual of pathology treats the subject from the clinical point of view. It is a pathology for the general practitioner and student, and therefore disputed theories and controversial subjects have been omitted. A further object was to present his subject in as concise a manner as possible, making the work serviceable as a quick reference book for the busy practitioner. Illustrations have been most freely introduced, aiding greatly in the recognition of diseases; and a large number of microscopic pictures illustrating pathologic conditions will be found especially valuable. Dr. McConnell's hospital connections have furnished him with excellent material for the laboratory study.

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THE HARVEY LECTURES. Delivered under the auspices of the Harvey Society of New York, 1905 - 1906.—8vo, cloth, pp. 337. J. B. Lippincott Co., Publishers, Philadelphia and London, 1906.

The Harvey Society was organized in the spring of 1905, its avowed object being the diffusion of the medical sciences by

means of public lectures. While clinical work has been actively engaged in for many years, these lectures are mainly along the lines of research work, and the lecturers have been selected on account of special adaptation of their research work on the subjects presented by them.

In this volume we have after a brief Introduction, The Theory of Narcosis by Prof. Hans Meyer, of Vienna; Modern Problems of Metabolism by Prof. Von Noorden, of Vienna; Trypanosomes by Prof. Fred. G. Novy, of Michigan; Autolysis by Dr. P. A. Levene, of the Rockefeller Institute; Serum Therapy by Prof. Wm. H. Park, of New York; The Neurones by Prof. Lewellys F. Barker, of Johns Hopkins; Fatigue by Prof. Fred. S. Lee, of Columbia Univ.; Formation of Uric Acid by Prof. L. B. Mendel, of Yale Univ.; Power to Regenerate in Man and Vertebrates by Prof. T. H. Morgan, of Columbia Univ.; Nature and Cause of Old Age by Prof. Chas. H. Minot, of Harvard Univ.; Modern Views of Placentation by Prof. J. Clarence Webster, of Univ. of Chicago; Some Phases of Tuberculosis by Prof. Theobald Smith, of Harvard; and the Cause of Heart Beat by Prof. W. H. Howell, of Johns Hopkins.

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**CONSERVATIVE GYNECOLOGY AND ELECTRO-THERAPEUTICS.** A Practical Treatise on the Diseases of Women and Their Treatment by Electricity.—By G. BETTON MASSEY, M. D., Attending Surgeon to the American Oncologic Hospital, Philadelphia; Fellow and ex-President of the American Electro-Therapeutic Association, etc., etc. Fifth, carefully revised edition. Illustrated with twelve original full-page chromolithographic plates of drawings and paintings, fifteen full-page half-tone plates of photographs made from nature, and 157 half-tone and photo-engravings in the text. Complete in one royal octavo volume of 467 pages. Extra cloth, beveled edges. Price, \$4.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

The demand for a fifth edition of this work within a year of the appearance of the fourth edition is ample evidence of the increasing prevalence of conservatism in gynecology; and for this broadening of therapeutic effort the medical profession itself, no less than womankind, should be most thankful.

The entire subject of electro-therapeutics in relation to gyne-

**A MANUAL OF NORMAL HISTOLOGY AND ORGANOGRAPHY.**—By **CHARLES HILL, Ph. D., M. D.,** Assistant Professor of Histology and Embryology, Northwestern University Medical School, Chicago. 12mo vol.—pp. 600, with 312 illustrations. Philadelphia and London: W. B. Saunders Company, 1906. Flexible leather, \$2.00 net.

is written in the interests of elementary  
elemental fact

SERVICE OF MEDICINE. Seven Addresses—  
Privatdocent in Internal Medicine at the  
authorized translation by DR. MARTIN H.  
iology at the Oakland College of Medicine  
1.25, net. John Wiley & Sons, New York,

acter of the subjects touched upon by  
comment. It is only hoped that the trans-  
-t too much of the spirit and the letter of  
The volume as a whole represents another  
e of physical chemistry in the biological  
t is not the tendency of modern times to  
es or to create new ones, specialism is fol-  
t necessity, so that it will not seem strange  
re we shall come to recognize as branches  
y from the trunk which all these sciences  
*physico-chemical physiology* and a *physico-*

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OGY. The Diseases of the Nose, Throat, and Ear.—  
GRAYSON, M. D., Clinical Professor of Laryngology,  
ment, University of Pennsylvania. New second edi-  
d enlarged. Octavo, about 550 pages, with 152 en-  
5 plates in black and colors. Cloth, \$4.00, net Lea-  
., Philadelphia and New York, 1906.

uishing feature of Dr. Grayson's treatise on the  
and Ear, in its first edition was the manifest skill  
selected exactly what his readers would desire to  
the exceeding clarity of his presentation. He has  
at thought to those who wish to know not only *what*  
190 *how* to do it. Thus he has selected the best from  
of possible therapeutics for each condition, and pre-  
n full detail, with modifications to suit complicated and  
al cases. He has been guided by his experience in  
those measures which have been most often successful  
uing the symptoms of a disease and shortening its dura-  
He has endeavored to approach the value of clinical in-  
ion by dwelling at such length on each distinct detail of

examination and of therapeutic technique that the reader shall miss the benefit of personal teaching as little as possible, and has given us a volume which appeals equally to the interest of students, practitioners, and specialists.

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**THE TOXINS AND VEMONS AND THEIR ANTIBODIES.**—By EM. Pozzi-Escot. Authorized translation by ALFRED I. COHN, Ph. D. 12mo, 101 pages. Cloth, \$1.00, net. John Wiley & Sons, New York, 1906.

Our knowledge of the toxins is of quite recent date. In this volume we have studied, besides the true toxins — substances of cellular origin and of albuminoid nature and unknown composition — other toxic substances, the nitrogenized alkaloidal bases introduced into science through the researches of Selmi, Armand Gautier, and von Behring, and which are highly hydrogenized nitrogenous crystallizable principles of definite chemical composition — the products of the more or less advanced breaking down of albuminoids.

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**PULMONARY TUBERCULOSIS: Its Modern and Specialized Treatment, with a brief account of the methods of study and treatment at the Henry Phipps Institute of Philadelphia.**—By ALBERT PHILIP FRANCINE, A. M., (Harv.), M. D. (U. of P.), of the Staff of the Henry Phipps Institute, Philadelphia; Examining Physician to the White Haven Sanatorium; Instructor in Medicine and Physician to the Medical Dispensary of the University of Pennsylvania; Medical Registrar to the Philadelphia Hospital. 12mo, 240 pages, illustrated. Cloth, \$2.00, net. J. B. Lippincott Company, Publishers, Philadelphia and London, 1906.

This book presents the subject of the treatment of consumption in a practical and masterly fashion. It deals with it in all its phases, and is at once exhaustive and relatively brief in view of the detail and completeness of its discussions.

Each chapter is essentially a monograph on the subject with which it deals, and presents not only the author's views and experience, but those of other prominent workers in this field. Broadly speaking, the book discusses the hygienic, climatic, and dietetic treatment of tuberculosis; the treatment by specific therapy; the use of drugs; the treatment of symptoms and complications.

The chapters on Rest, Exercise, Fresh Air, Diet, and Climate are most carefully planned and full of useful details and directions. Those on the use of Koch's Tuberculin and Tulase, and the specific sera, are the most complete monographs to date on these subjects. The indications and contra-indications to the use of drugs are fully discussed, and each drug with its uses and abuses, its dosage, etc., is considered under a separate heading. Full directions for the treatment of hemorrhage, cough, gastro-intestinal disturbance, pain, dyspnea, etc., are also given under separate headings. Not the least interesting nor important chapter is that dealing with the methods of study and treatment of cases at the Phipps Institute, Philadelphia.

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A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS, with Especial Reference to the Clinical Application of Drugs.—By JOHN V. SHOEMAKER, M. D., LL. D., Professor of Materia Medica, Pharmacology, and Therapeutics, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital; Member of the American Medical Association and the British Medical Association; Fellow of the Medical Society of London, etc., etc. Sixth edition. Thoroughly revised (in conformity with latest revised U. S. Pharmacopœia, 1905). Royal 8vo. 1244 pages. Extra cloth. Price, \$5.00, net; full sheep, \$6.00, net. F. A. Davis Company, Publishers, 1914 - 16 Cherry Street, Philadelphia, Pa.

Although the previous editions of this valuable text-book have been highly satisfactory, both to students and practitioners, the publication of a new revision of the United States Pharmacopœia has afforded the author an opportunity of making many new additions to the text which seem to make the Sixth Edition an excellent representative of the present state of therapeutics. The numerous pharmacopœial alterations in nomenclature and in the strength of official preparations, and also the many new titles have necessitated a thorough revision of every page, so as to make the chapter on "Drugs" correspond with the present standards, both of the United States, and British Pharmacopœias.

In addition, the initial chapter on "General Considerations Concerning Remedies and Systems of Therapeutics," has been added, revised from the limited Students' Edition. Also, in the

contents of this excellent volume will be found a thorough consideration of many of the recent therapeutic agents, viz:—Roentgen Ray, Serum Therapy, Animal Extracts, Vibro-therapy, Hydro-therapy, etc.

However, notwithstanding the large addition of new material, every part has been revised, and when possible, condensed, so that the size of the present volume has not been materially increased.

In preparing the present edition the author has kept in view, as has always been a characteristic feature of his previous works, the needs of the medical student, as well as the practitioner and hopes that it will be found no less useful, to those who consult it now, than the former editions which it supersedes.

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STENHOUSE AND FERGUSON'S EPITOME OF PATHOLOGY.—By JOHN STENHOUSE, M. D., of the University of Toronto, and JOHN FERGUSON, M. D., Toronto, Canada. Edited by VICTOR C. PEDERSEN, M. D. 12mo, 285 pages, amply illustrated. Cloth, \$1.00, net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1906.

Drs. Stenhouse and Ferguson devote the first half of their work to *General Pathology*, after which the *Special Pathology* of the various organs and systems is considered. Mastery of the information so easily presented in this compact volume will qualify its readers on the essentials of the subject and facilitate the work of those who desire to pursue it further in the larger treatises.

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## *Selections.*

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CHROMIC ACID.—*The Medical Council* for December, 1906, quotes Sabourand (*La Clinique*) as to the value of chromic acid in three special conditions: (1) In syphilitic glossitis with fissures and irregularly bosselated surface, the application twice a week to the ulcers and rhagades of a twenty per cent. solution works a miracle in combination with the constitutional treatment. (2) In syphilis or venereal vegetations of the anus or genital organs, the application by an expert hand of pure chromic acid causes prompt shriveling and disappearance of these growths. It should



be applied with the greatest care without any excess. In the hands of those not experienced in its use a twenty per cent. solution is to be preferred. (3) In plantar bromidrosis, or disagreeable sweating of the feet, a four per cent. solution in distilled water gives successful results; applied on a little absorbent cotton, moistening the entire surface but especially the interdigital folds and under the toes at first every day, then every second day and finally every third day.

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EPILEPSY.—Matthew Woods, in the *Monthly Cyclopaedia of Practical Medicine* for November, 1906, reports a case of epilepsy of fifty-two years duration with recovery. The patient was placed on an almost vegetable diet, only a very little meat being given in the middle of the day and each meal being as abstemious as possible, as in epilepsy especially, the digestive organs should never be embarrassed by excessive food. A capule containing 1-10 grain capsicum, 1-30 grain strychnin sulphate and one-half grain hydrocyanate of iron was to be taken before each meal and at bedtime. He asserts that the effect of capsicum in epilepsy with nausea or sick headache is very satisfactory and hydrocyanate of iron is the only chalybeate that can be used without hurt for the often concomitant anemia of this disorder. Tincture of the chlorid of iron will increase rather than diminish the paroxysms, and he believes it should never be used in epilepsy. He gave potassic bromid a dram and a half a day in four doses, highly diluted in water, at eight, twelve, four and eight o'clock. The first week, the doses should be given in four ounces of water each, unless the attacks are nocturnal, when after a month, the two last doses should be united and taken at nine o'clock in a pint of water to favor exosmosis and excretion. This is the method, somewhat modified, of administering the bromids briefly alluded to by Professor Niemeyer, and by which can be obtained such good results. In high dilution it is not necessary to use such large doses of the drug and it is not so likely to produce bromism. The bromids in concentrated solution sometimes increase convulsions in epilepsy, and should be avoided in this form. Capsicum, strychnin, arsenic, belladonna, digitalis, and hydrocy-

nate of iron are to be given as indicated, in addition to the bromid.  
— *Cleveland Med. Jour.*

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THE MEDICAL TREATMENT OF DUODENAL AND GASTRIC ULCERS.—A. Lambert, New York City (*Journal A. M. A.*, September 15), states that when medical treatment is considered desirable in gastric or duodenal ulcer, the first essential is complete rest for the body and stomach, which implies rest in bed and rectal feeding, followed by milk diet. The length of time necessary for the patient to remain in bed varies from a week or two to several weeks, according to the severity of the case, and the rectal feeding should continue from three or four to ten days correspondingly. Gastric feeding should be begun before the rectum becomes intolerant, and as the amount given this way is increased that by the rectum should be decreased. Peptonized milk at long intervals should be the first food, and at the end of the week the patient should be getting a quart in twenty-four hours, with the rectal feeding discontinued. It should then be gradually increased up to two quarts a day, and it is safe to begin to reduce the peptonization and to use cooked cereal gruel as part of the diluent. At the end of the fourth week the patient may be taking raw milk, and in the fifth and sixth weeks can gradually return to a light unirritating natural diet. During the bed-fast period the patient should receive daily alcohol spongings and baths and light massage, avoiding the abdomen. Some unirritating iron preparation may be given if necessary.

To insure against relapses the patient should be instructed to use an unirritating diet and mode of life, avoiding over-exertion, alcohol, highly-spiced foods, and anything that will irritate the stomach. Large doses of bismuth subnitrate are recommended before meals. The Lenhartz protein diet is mentioned and described. Special mention is made of two methods of drug treatment: The Fleiner bismuth cure and Cohnheim's olive oil treatment. The objections to them are the use of the tube, which the author, however, thinks is not always essential and can be used safely with due precautions. In cases with hemorrhage, however, it is decidedly contraindicated. The use of astringents is men-

tioned; also the use of alkalies. The serious complications of ulcer are perforation and hemorrhage, and the former is always a matter for surgical treatment, and the latter, if severe; the patient should not look upon the surgeon as the last resort.

While the results of medical treatment are not altogether favorable, Lambert thinks that if we could separate the acute cases in young individuals, we would have a higher percentage of actual cures. As regards hemorrhages, he thinks medical treatment offers more chances than surgery, but accepts Loube's indications for surgical interference: "1. Repeated, little, unceasing hemorrhages, sapping the vitality of the patient, absolutely indicate early surgical interference, and all the more so if stasis is also present. 2. A simple profuse hemorrhage is not a surgical indication. But if it is repeated, an operation is relatively, not absolutely, indicated. An operation is only indicated if the pulse and general condition of the patient justify it." Lambert thinks that in skilled hands the mortality of gastric surgery for ulcer is to-day about the same as in medical treatment without surgery. Physicians cannot adopt enthusiastically a surgical point of view until the best operation and its technic is more generally agreed on, and we have more statistics of final results. At present, he believes, at least, in careful preliminary medical treatment.

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A MISTAKEN VIEW OF THE PUBLISHED FORMULA QUESTION.—In the *St. Louis Medical and Surgical Journal* for May, an editorial article on the published formula question contains the following words: "They publish the advertisement of a proprietary remedy and append to it a formula which it is impossible to employ for the successful reproduction of the preparation, and feel that their duty is done."

We do not conceive the possible employment of the formula for the successful reproduction of the preparation to have anything to do with the physician one way or the other. The need of the physician is for so much information as to the constitution of any remedy he is asked to use as will enable him intelligently to realize in each individual case as it presents itself whether the remedy is indicated at all, whether it has specific objections in this

particular case that outweigh its possible advantages, and how much may be properly prescribed and how often, having regard to the age, sex, condition, and stage of the case of his patient. If this is not part of a necessary therapeutic knowledge properly within the province of the physician and altogether outside the province of the manufacturer we should like to know what is. On the other hand, if the manufacturer can give us this essential information in a way that shall render it impossible for others to employ the formula for the successful reproduction of the preparation, we believe him justly entitled to do so. This is a matter of the commercial side of pharmacy with which the physician has properly nothing whatever to do. Our objective is that knowledge which shall enable us properly to do our work; not the knowledge which shall enable others improperly to do his — and him.

It is just as well that we should learn to distinguish conscientiousness from cant at the earliest possible date.—*St. Louis Medical Review*.

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SOME OBSERVATIONS ON PROSTATECTOMY.—L. Bolton Bangs (*Medical Record*) considers the following factors in deciding whether or not to advise prostatectomy: The general condition of the patient, his social condition and environment, his temperament and his accessibility to judicious medical advice and assistance; whether or not catheter life is likely to fail, and, if it has failed, in what degree; and, finally, what measure of relief is to be gained if, after the operation, some imperfection should remain which is insignificant in comparison with the prior condition. The writer then gives the histories of a number of patients which show how often significant symptoms are appreciated or overlooked. He speaks of certain cases in which small prostates have been removed when there were few or no signs of obstruction. In these cases it was not recognized that chronic interstitial cystitis had reduced the capacity of the bladder so that frequent urination had become a necessity. Each case must be studied by itself. The final outcome of the operation cannot be foretold definitely, but when the indications are clear it can be wisely advised on account of the great relief and comfort which result.

The "Just as good" fiends are now pirating.—Insist on

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EDITOR AND PROPRIETOR

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### *Original Communications.*

#### A FURTHER REPORT ON OPSONIC TREATMENT.\*

BY JAMES M. KING, M. D., OF NASHVILLE, TENN.

In presenting this paper to the Academy I wish to report cases from my own practice in opsonic treatment, and also give a report of the work done in England. Last fall in a paper read before the Middle Tennessee Medical Association, and published in the December, 1906, No. of the SOUTHERN PRACTITIONER, page 689, I presented the principles and methods connected with the subject, therefore in this paper I shall omit all such details, and submit the following report of cases.

*Case 1.*— Referred to me by Dr. Bate Dozier. A young man with sycosis on both sides of face and chin of a few months duration. There were no nodules, but the pustules were numerous

\*Read at regular meeting of the Nashville Academy of Medicine, Tuesday, March 12, 1907.

and each was pierced by a hair. Previously, various local treatment had been used.

I began treatment with X-rays for epilation and the daily use of an antiparasitic lotion and ointment. This gave but partial relief. Upon examination the pus showed an infection with *staphylococcus aureus*.

I finally decided to give the opsonic treatment, so on Dec. 2, 1906, I found his index to be 1.6, and it being so high above normal I then decided to defer the opsonic treatment and rely upon local treatment. I had daily hot fomentations of lotio alba made to the face for one hour at the time. This dried the pustules up, but upon stopping the fomentations the pustules returned. I then positively determined to give an inoculation, and on December 19 I gave him 280 million staphylococci. An immediate improvement was observed after this inoculation, the pustules cleared up and the face has remained free to this date, March 10, 1907. His index remains high.

*Case 2.*—Referred by Dr. E. G. Wood. A young man, age 21, with acne vulgaris of five years' standing. The face, neck, chest, shoulders, and back were covered with comedones, papules, and pustules.

I began treatment with local applications and with marked improvement, but recurrences followed and it appeared that a permanent cure could not be established. The patient had at different times suffered from severe furunculosis.

The pustules showed an infection of *staphylococcus aureus*. His opsonic index on Nov. 25, 1906, was found to be .89. In order to combat the pus formation I gave an inoculation of 210 million cocci. This was followed by an improvement in lessening the number of pustules. His index on Dec. 2, 1906 was 2.1. On December 6 he received another inoculation of 210 million. To date he has received in all five inoculations, the last one 319 million cocci on Feb. 27, 1907. On March 10, 1907, his index was 2.12.

His condition is very much improved. The chest and back are practically free from papules and pustules. The face and

neck are also much improved, but an occasional pustule appears. The patient is delighted with the marked improvement.

*Case 3.*—A young woman, with rosacea, comedones, and pustular acne over the face. Her index was .53. I gave her two inoculations, one of 210 million and the other of 280 million cocci. The gastric reaction on examination was excessively acid.

After the inoculations there was practically a cessation of the pustules, and after treatment for the hyperacidity the redness of the face was improved.

*Case 4.*—A young man with acne vulgaris of several years' standing. An error in the laboratory prevented me from obtaining his index at the beginning of his treatment. A subsequent examination after inoculation showed his index to be 2.13 and a marked improvement in his condition.

Cases 5 and 6 have done equally as well.

In all of these cases I applied external and internal medication in addition to the opsonic treatment.

With reference to tuberculósis, Dr. Geo. W. Ross makes the following statement (*Brit. Med. Jour.*, July 7, 1906):—

“From the opsonic standpoint, tuberculous infections fall into two great classes. First, those which are strictly localized, such as lupus, cystitis, gland of the neck, etc.; second, those which are not localized or are systemic.

“*Localized T. B. Infections.*—As a rule, the opsonic index will be found lower than 0.8, that is, below the lowest limit of normal. Occasionally it may sink to 0.2 in certain long-standing cases of lupus. It is possible that this depression of the opsonic power of the blood antedates the infection; or in other words, this lowered opsonic power has made a tubercular infection possible. In the majority of cases of strictly localized T. B., such as cystitis, ulceration, enlargement of the glands, etc., the opsonic power can be raised and *pari passu* the tuberculous process is relieved and controlled. I hesitate to say ‘cured,’ because sufficient time has not elapsed in most cases treated by inoculation to eliminate the possibility of a relapse.”

With this statement Dr. Ross favorably reported on one case

of tuberculous cystitis, two cases of glands of the neck, and one case of iritis.

“ *Pulmonary Tuberculosis.*— Considerable investigation into the character of opsonic index in different varieties of pulmonary tuberculosis has yielded the following generalizations:—

“ 1. Early cases, or more advanced cases that have had complete rest in bed for a time, and also sanatorium ‘cures’ show a low or lowered index.

“ 2. The more advanced cases show a high or fluctuating index.

“ The importance of the fact that early cases of pulmonary tuberculosis have this lowered index, cannot be easily over-estimated, because it probably means that the tuberculous process tends to be localized. Theoretically inoculations would be beneficial. I have treated two such cases with excellent results.”

Crace-Calvert corroborates Ross in this statement. The former says that the majority of such cases would recover from sanatorium treatment, but the course would be shortened by inoculation.

Ross’ experience leads him to believe that there is not much hope for tuberculous inoculation in well-advanced cases.

*Diagnosis.*— With reference to diagnosis certain points have been fairly well established:—

1. Normal individuals present a constant opsonic index for the various pathogenic bacteria.

2. Individuals, the subjects of a strictly localized infection, due to any micro-organism, show a lowered index to that particular micro-organism as compared with a normal person.

3. Individuals, the subjects of systemic infection, show a higher index, or a fluctuating index. Dr. Wright believes the fluctuation to be due to repeated inoculations from his own focus of disease, and is comparable to the effects of an artificial inoculation; namely, the negative and positive phase.

Ross reports one case which had been sent to the hospital as one of tuberculosis, but there being no positive signs, an opsonic examination revealed a systemic gonococcal infection — the gonococcal index was twice normal.



Ross has used this method in diagnosis in —

1. Malignant diseases of the lung.
2. Chronic bronchitis and emphysema.
3. Bronchiectasis.
4. General debility.
5. In cases of peritoneal and pleural effusion. The diagnosis of early tuberculosis is under investigation.

Dr. H. B. Dodds makes a report, in the *British Medical Journal*, July 7, 1906, on six cases as follows with reference to diagnosis of tuberculosis by an estimation of the opsonic index. He used the old tuberculin. In four cases the index was normal the day before and the day after an injection of 1 mg. T. O. One case, M 5, dropped from 1.0 to 0.7 and rose on the next day to 1.4. There was no temperature reaction and no bacilli were found where sputum could be obtained. The sixth case had pulmonary tuberculosis — bacilli in sputum, crepitations in both apices. His index was 0.7. Twelve hours after injection of .05 mg. T. O. his index rose to 1.1, and by the fifth day fell to 0.9. His index was kept up by subsequent injections controlled by the estimation of his opsonin. He had no temperature reaction.

The conclusions drawn are these: Tuberculin T. O., like tuberculin T. R., affects the opsonic index of tuberculous persons, and not that of healthy people. A normal index points to a negative diagnosis, but not conclusively as shown in case five, in whom a provisional diagnosis of tuberculosis has been made.

The report of Dr. Dodds, in the *British Medical Journal*, July 7, 1906, page 22, brings forth the following remarks from Stewart and Ritchie of the Surgical Laboratory, University of Edinburgh, in the next issue: "Dr. Dodd's memorandum of July 7, calls attention to the important part which the opsonic index may play in the early diagnosis of the more obscure forms of microbic diseases. The practically constant recurrence of a negative phase observed to follow therapeutic inoculations with vaccines suggests the obvious possibility of its application to diagnosis. That this method has not already been developed is probably to be attributed to the fact that our fundamental knowledge of the actions and nature of the opsonins and the phenomena consequent

on a bacterial inoculation is so limited and incomplete. Further data are required as to the result of such inoculations in healthy individuals."

With a view of elucidating this question Stewart and Ritchie have been engaged during the past six months making systematic blood examinations of over fifty patients and healthy individuals before and after inoculations with various vaccines. Their work so far has shown that the opsonic index per se is inadequate as a constant, reliable test; that observations on healthy serums also give inconstant results; and further, that a very extended series of observations is necessary on cases that admit of verification of the diagnosis.

In their opinion the special points which require investigation are: "(1) The most suitable dose of vaccine, (2) the periods at which estimation require to be made after inoculation, (3) the nature and effects of special features of disease in modifying the results obtained, and (4) the action of repeated inoculations on healthy individuals."

Drs. Merkin and Wheeler made a report in the *British Medical Journal*, July 21, 1906, p. 131, on the variations of the opsonic index after exercise, of patients suffering from pulmonary tuberculosis, and in every case examined except *one*, the index was lowered by exercise.

The question as to whether there would be any variation in the index of a healthy individual after exercise occurred to G. G. Ellett, of the Cambridge (Eng.) pathological laboratory. In order to ascertain the facts in the case he selected two subjects, examining their blood a number of times before and after rowing, and found that their indices were lowered by exercise. One case was examined eleven times before exercise and nine times afterward and the indices averaged: Before exercise, 1.32; after exercise, 1.17. In the other case the blood was examined five times before exercise and five after and the indices averaged: Before exercise, 1.08; after exercise, 0.78.

*Plasma of Muscle.*—R. W. Allen, of Guy's Hospital, reports from a series of experiments that muscle plasma has as high or higher index than blood plasma.

Dr. Geo. A. Crace-Calvert, reporting in the *British Medical Journal* on the opsonic index of tuberculous patients undergoing sanatorium treatment, gives the following: \* \* \* "Bulloch, who examined the serum of a large number of nurses (40), and medical students (44), found that the index varies from 0.8 to 1.2, the majority being 1.0. He also found that the index of seventy-five per cent. of lupus cases presenting themselves for treatment at the London Hospital was below 0.8, whilst that of eleven surgical cases of tuberculosis was also below 0.8. It appears that these facts would aid in diagnosis, especially when combined with the reaction which follows an inoculation of tubercle vaccine.

Urwick (*British Medical Journal*, July 22, 1905), reports the opsonic index of thirty-three cases of pulmonary tuberculosis as being higher than normal.

Crace-Calvert divides his sanatorium cases into four classes. "(1) In two cases that he examined as soon as they came, one had low, while the other a high index, both being early cases. It is interesting to note that in the case with the low index the disease was very slight and his low index may be due to the absence of auto-inoculation, while in the case with the high index the disease is rather more advanced, resulting, perhaps, from more auto-inoculation. Of six ordinary early cases, four had high and two low index.

"(2) In cases of acute tuberculosis with temperature, the index is fluctuating from day to day, sometimes low and sometimes high. The high index is probably due to auto-inoculation by considerable amount of toxines, which not only affect the opsonic index, but also raise the temperature, interfere with the appetite, etc., so that we get a weakly resisting organism where a high index is of no avail, and is probably only another sign of the acuteness of the disease. The prognosis is bad unless the index becomes steady.

"(3) Cases with a fair amount of disease in a chronic state give an index usually a little below normal, but may be just above normal, and this may be due to the lack of stimulation from auto-inoculation, since tuberculin T. B. raises the index. Lawson

(*Lancet*, Dec. 9, 1905) reports on twenty-five cases of this type, twenty-three of which had a low index.

"(4) With reference to the index in cured or arrested cases, Bulloch found a low index in thirteen examined, and Lawson found it ranging from 0.5 to 2.1 in thirty cases, seventeen being below 1.0."

Merkin and Wheeler (*Brit. Med. Jour.*, Nov. 25, 1905) proved that exercise caused auto-inoculation followed by the negative and afterward by positive phase, and this has been confirmed.

Crace-Calvert advises frequent examination for opsonic index, and a careful dosage of the T. R. He thinks that the cure of early cases is hastened by inoculation of T. R.

He thinks it is unsafe to inject a patient who has a fluctuating index, for fear of producing a lower negative phase. He would rest and feed the patient until auto-inoculation ceased, the index become constant, and then, if low, give inoculation.

The greatest benefit derived from inoculation is in those chronic cases in which there is a fair amount of disease and a fair amount of the cirrhosis and healing. The index is usually low in such cases.

He reports this very interesting case: "We had one case which started with apical lung mischief and quieted down, and then after a year or more began to have acute abdominal pain in two or three places, where I could make out indefinite swellings, due, I believe, to tuberculous mesenteric glands causing a local peritonitis. I kept him in bed for four months practically without his improvement, the pain at times being so bad that I had to give him a grain of morphine, besides hot fomentations, etc. Then I began inoculations with T. R., controlling them by his index, which was low at the start. Two months later he was free from pain and just beginning to get about. He went home and had a slight return of the pain, owing to trying to do too much, and came back for another inoculation. He kept free from pain for two months, and then it recurred and I gave him another inoculation, and now, four months later, he reports himself as very well, and a few weeks ago climbed Moel Famman (1,820 ft.) without more than temporary discomfort."

He also reports this interesting case. "One other case I may mention is that of one patient with a high tuberculous index and a low staphylococcic index. He suffered from severe furunculosis, and by an inoculation of a staphylococcic vaccine I raised his staphylococci index and improved his boils without altering his tuberculous index.

Ross (*Brit. Med. Jour.*, Nov. 24, 1906) reports the following case of the Victoria Park Chest Hospital, London: "Male, 20 years, developed right-side emphysema, treated by resection and drainage. Seven weeks later the sinus was four inches long and fully one half ounce of pus was discharged daily, and upon examination the pneumococcus was found. His pneumococcic opsonic index was found to be 1.0, but inoculations were made, the index raised to 2.5. During a period of two weeks he had three inoculations, and at the end of this time the discharge had ceased, the sinus was closed, and the patient went to work."

He reports that he has treated successfully two cases of chronic acne, and one case of intractable furunculosis.

In the same list he reports this interesting case of tubercular iritis. The opsonic treatment was the last resort previous to enucleation.

"The patient, a boy, had definite tubercular nodules on both irises, two on the left and one larger on the right. Corneal opacities and keratitis punctated considerably obscured his vision. Under inoculation with T. R., in doses of 1-1000 mm. we could watch the nodules slowly melt away and the opacities clear up, until now, after nine months, there is but very little to be seen on either iris."

Dr. Thorne, in *British Medical Journal*, Feb. 23, 1907, reports this case of furunculosis. He treated the case from November, 1905 to July, 1906, by all medical means without any results. He then adopted opsonic treatment, and after an examination of the pus he gave six inoculations of Wright's antistaphylococcic vaccine with ten days intervening between each inoculation. No fresh boils have appeared since the first inoculation, now six months, and the patient is in perfect health.

RESTORATION OF NERVOUS EQUILIBRIUM IN  
NEURASTHENIA, HYSTERIA, ACUTE AND CHRONIC  
DEPRESSION OF THE NERVOUS SYSTEM, AND IN  
NEUROSIS FOLLOWING THE WITHDRAWAL OF  
ALCOHOLICS, NARCOTICS, AND DRUGS UNDER THE  
SCIENTIFIC USAGE OF *HYOS-SCO-DEINE*.

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BY G. HOWARD THOMPSON, M. D., OF KANSAS CITY, MO.

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(Formerly Professor of Materia Medica and Therapeutics, and  
of the Principles of Medicine and Clinical Therapeutics in the  
St. Louis College of Physicians and Surgeons; Editor  
of the *Regular Medical Visitor*, etc.)

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AFTER a few years in general practice the great average physician is apt to have fallen into routine habits of prescribing for the various ailments which it has been his lot to treat. So fixed do these habits become that it takes untiring efforts, argumentative and demonstrative, to induce him to modify his routine by addition to or elimination from his medical armamentarium. Should one fail in a few successive cases at the outset of his career to get the classical results of a remedy as taught by his text-books, he concludes that the remedy is over-estimated by the experimenters, and he retires it at once to the top shelf to accumulate dust throughout the succeeding years. Should a few severe cases recover quickly under treatment comprising some special remedy, he is liable to regard that remedy as a sheet anchor in subsequent cases of the same character, until a few unfortunate results arouse his suspicion and start him to thinking, which often results in confirmed skepticism. The physician should not be too quick to condemn nor too hasty to adopt a new remedy. He should be careful in his choosing and receptive to conviction from logical reasoning and demonstration. In order properly to estimate the value of newer remedies he must take some statements of his colleagues on faith and depend to some extent on his own selected cases to verify or refute them. My purpose in writing

this article is to call the attention of the general practitioner of medicine to a remedy which I have found valuable in the treatment of depressed states of the nervous system, such as we all encounter frequently in the course of practice. The most delicate stickler for ethical technicalities can find no ground for objection in the formula of Hyos-Sco-Deine presented herewith. Though the alkaloidal compounds are not all new, the combination represents essentially a new discovery in medicine in the field of the nervous system.

We used to learn from our text-books that the dose of codein is from a half to two grains or more. Later experience has confirmed the value of this remedy and has demonstrated its efficacy in much smaller doses. It is devoid of effect in the gastric and respiratory secretions in the ordinary dosage, and frequent use is not likely to induce habit. It is valuable in respiratory irritations and as a hypnotic, and as an abdominal anodyne it has succeeded morphine. Hyoscine and scopolamine are hypnotics, anodynes, and nerve tranquilizers more powerful, dose for dose, than all other heretofore discovered agencies. Pilocarpine and codein neutralize the possible effect of the last two on vision and secretion. The entire combination presents a remedy found by experience to be a restorer of nervous equilibrium and an anodyne and hypnotic which should at once appeal to the most exacting prescriber.

My first experience with the remedy now known as Hyos-Sco-Deine was in association with Dr. J. N. Groves, of Effingham, Ill., in the treatment of nervous depressions coming to us for treatment for drug and alcoholic addiction in our sanitarium at that place. At the start the remedy was used by Dr. Groves in addition to his own plan of treatment until some days later he told me to order some more of it, as it was doing all the work claimed for it. I then became interested in it personally and attended to its administration in a large variety of cases, a few of which are here briefly detailed:—

Henry F., bachelor, aged 40, of Effingham, Ill., came to me Sept. 10, 1905, for treatment for nervous depression and physical weakness. He is a farmer. His habits were regular. He

drank daily about forty drinks of whisky and chewed a ten-cent plug of tobacco. His bowels were also regular, moving once a day, though he ate scanty meals three times a day. He weighed 180 pounds and appeared muscular and powerful, but complained of being "weak as a cat" and no longer able to do his farm work. Examination of urine was negative. Physical examination showed irregular pulse 130, temperature 99.8°, enlarged liver, and gastric dilatation with pyrosis. Whisky and tobacco were withdrawn abruptly. This was done at patient's request on learning that his condition was the result of these excesses. His gastric dilatation was treated with a combination of sulpho carbolates of zinc, sodium, and calcium, each a grain and a half (triple sulpho carbolates) taken one and two hours after meals with occasionally five or ten grains of bicarbonate of soda or "soda mint" tablets for heartburn. For his nervous irritability hypodermic injections of Hyos-Sco-Deine M. xv were administered three times a day. The nervousness was rapidly controlled and the pulse rate became regular and daily slower. After a week the injections were decreased to M. x., t. i. d. for a week. At the beginning of the third week the pulse was regular and at 80 per minute, temperature normal, and his muscular vigor was almost as good as ever. During the third week the injections were discontinued and the patient reported weekly for four weeks afterward feeling well and strong with no symptoms and pulse ranging from 70 to 80. In the last year and a half occasional interviews confirm his complete cure and restoration to perfect health, weighing 198 pounds.

Miss S., aged 32, of Marion, Ill., consulted us for palpitation of the heart and entered Effingham Sanitarium Oct. 15, 1905. She complained of precordial distress, dyspnea, and faintness. Pulse 118, temperature 98.6°, menstrual periods regular but scanty discharge, leucorrhea present, general condition anemic. Hemoglobin, (Talquist's scale) 55%. Appetite poor, bowels moving three or four times a week irregularly. Vision poor, not materially improved by correction; frontal headaches, insomnia, mental and physical depression, no bad habits being in evidence nor elicited, there was none to treat; so efforts were



directed toward the general condition. Ten minim doses of Hyos-Sco-Deine were administered hypodermically three times a day for the purpose of restoring the nervous equilibrium, lowering the heart rate, increasing its force and improving arterial tension. This effect was promptly produced; her mind brightened, nervousness subsided, she slept soundly and wanted to return home in two days and carry out the treatment herself. However she remained a week receiving the injections and taking before meals a general stomachic tonic consisting of fluid extracts of gentian and quassia with elixir of celery, hops, and lettuce, a teaspoonful or two before each meal. We sent her the medicines from week to week for a month, the injection being taken internally at ten a. m., four p. m., and ten p. m. Her appetite improved and her weight increased, her pulse got regular and reduced to normal, she slept well, menstruation became normal. Soon afterwards she became engaged and in the spring of 1906 married and moved to St. Louis, where I have had occasion to see her at intervals till recently. She has had no relapse into her former neurotic condition to date.

Mrs. G., Greenup, Ill., aged 50, weight 160 pounds, medium height, complained for a year of palpitation and insomnia in many respects similar to the foregoing case. However she was not anemic nor neurotic in temperament. No organic lesions were found and physical examination and uranalysis elicited nothing. I had prescribed for her at weekly intervals for some time, endeavoring to find a means of effectively treating her through gastro-intestinal antiseptics and stimulants without success. A great many cases of Graves' disease came to us from all over southern Illinois, and for a time we treated her with thyroids in that supposition without material benefit. She returned again in the second week in Oct., 1905 to report, and I put her on a bottle of Hyos-Sco-Deine, ten to fifteen drops three times a day, carefully adapting the dosage to results obtained. She was not long in learning that fifteen drops were required to meet her symptoms. The first night she slept better than she had for months, though not continuously through the night. From the second night on she slept soundly, her cardiac trouble subsided, and in a few

days was down to 84, with the general tendency down to normal. After reporting weekly for five weeks she discontinued "because she was well." She is passing through her menopause and expects to have occasional slight relapses till this period is passed.

Ed. G., Neoga, Ill., aged 32, farmer, consulted us for chronic tic douloureux in November, 1905. He had had a severe attack a year previously which caught him like an electric shock and persisted some weeks, gradually abating. The present attack seized him in October with even greater severity; he thought he had been struck in the face and knocked against the door, which sensation was succeeded by intense jaw ache affecting upper and lower teeth of the right side. He felt that he wanted all his teeth removed on that side. His physical condition was otherwise perfect, and examination failed to elicit any cause for the neuralgia. He had taken coal tars, opiates, cannabis indica, etc., with no permanent relief. I gave him a hypodermic syringe barrel full of Hyos-Sco-Deine, about twenty minims, which gave prompt relief. Before his train left that evening I gave him another injection of ten minims as a precaution against the recurrence, or subsidence of the effect of the previous injection, and directed him to take ten minims by mouth three times a day on general principles for a week whether he had a relapse or not. We heard from him through another patient a month later. He was well and had had no more tic douloureux.

We nearly always had some drug addiction or whisky cases on hand, which is Dr. Groves' specialty. It was his observation that under Hyos-Sco-Deine the desire for alcohol rapidly ceased and became in fact repugnant, while the appetite for food returned, and the nervous system failed to react unfavorably on the withdrawal of the stimulant. I had opportunity to verify his assertion that the withdrawal of opiates was accomplished without suffering insomnia, diarrhea, mental and nervous excitation, nor other common phenomena incidental to the drug withdrawal. These observations have been of especial value to me since opening up my sanitarium in Kansas City. Though but two months in running order, we have treated a number of cases of dipsomania, most of them of the periodical type. In no case has it re-

quired more than two days after instituting the treatment to withdraw the alcoholic stimulants completely.

Gus B., of Stella, Neb., aged 38, entered my private hospital, Jan. 6, 1906, for treatment for inebriety. His wife requested and was granted the privilege of assisting in his care. It was impossible to estimate the total daily quantity of whisky and mixed drinks that he had been consuming for the previous two weeks. His periodicals usually lasted from six weeks to two months. He immediately received ten minims of Hyos-Sco-Deine hypodermically, which it was found necessary to repeat at three-hour intervals. As he had not slept well the preceding night the injection was increased to fifteen minims every three hours, making five in the day. Whisky was substituted with bottled beer at first, but he was allowed a drink of whisky on the second day. January 7 the injections were continued at same dose and rate, patient had one drink of whisky which he decided he wished he had not taken. January 8, patient getting nervous and shaky, smell of a whisky glass with dried whisky contents repugnant to him. Had no desire for any alcoholics. Injection dose increased to a full syringe barrellful, about twenty minims, every three hours. This served to correct his nervousness, and he felt like leaving the hospital for a walk, but soon realized his physical weakness. From now on the number of injections was gradually decreased till on the twelfth he was receiving three injections of twenty minims each. His appetite was good and his strength was rapidly returning. In the second week the dosage was decreased from twenty to ten minims three times a day. In the third week he received small injections morning and night on two days, then once a day for two days, then a day's intermission between injections, when he received his last dose. He had received permission to leave the hospital in the second week of treatment, but by that time he wanted to remain till he felt himself thoroughly responsible mentally as well as physically.

F. P. C., of Trenton, Mo., aged 42 years, was received into the private hospital Feb. 17, 1907 for treatment for dipsomania. He had been consuming between one and two quarts of whiskey

daily for three weeks and was becoming mildly delirious. He had been making unsuccessful efforts to quit and was taking medicine for this purpose whenever he remembered to, as a drunken well-meaning man might do. In entering the hospital he was so nervous that whisky did not even temporarily steady him. He spoke with the shaky voice of an old man, and tottered unsteadily when on his feet. His mind was, however, clear in the sense that he was not thick-tongued and reasoned correctly. He received immediately 20 minims of Hyos-Sco-Deine hypodermically. His pulse had previously been erratic, ranging from 80 to 120. He was incidentally addicted to the cigarette habit, rolling impossible cigarettes from "makings" of saw dust called tobacco. This accounted largely for his irregular heart action. He brought with him a pint bottle of bonded whiskey, which he was permitted to retain with misgivings on my part. At five p. m. he received his second injection of twenty minims, and at ten at night the same amount. His whisky bottle showed absence of about three ounces at bedtime. February 18 he received three injections of twenty minims. He had slept well during the night and had not further encroached on the bottle. During the day he had periods of increased nervousness, and at such times took small drinks of whisky. I say small drinks advisedly. He would like to have taken grown men's drinks, but he did not relish what little he took. I concluded that the effect of the injections wore off somewhat before the next was due, and in the third day commenced giving them at intervals of four hours: 8 a. m., 12 m., 4 p. m., and 8 p. m. February 19 found about three ounces of whisky in the bottom of the bottle. He had no desire for it, but it was a shame to let it evaporate, so he poured out a medium sized drink and drank it. In five minutes he had eliminated it by reverse peristalsis. He did not become nervous in the intervals between these injections at four-hour intervals as he had previously on the three a day. However, on February 23 I thought I would have better results with smaller doses and more frequent injections, so I injected fifteen minims every three hours, making five in the day. This seemed to produce a more even nervous equilibrium. He had slept well

each night since receiving the Hyoc-Sco-Deine injections, though he was physically weak and trembling to a slight extent for some days following the withdrawal of his alcohol; still the nerve balance was maintained after the first three days, though not accurately adjusted immediately.

Every case is more or less a law unto itself and efficient treatment must weigh idiosyncrasy while seeking to balance nerve irritability caused by withdrawal of drugs. We must first dose according to our experience, and the law of averages for dosage must mould itself to individual requirements. Thus it took some days in this instance to adjust dosage and intervals of dosage to requirements of the case. In the first few days he substituted small sized "short smoke" cigars for cigarettes, from these not satisfying he tried full size "good" cigars. These failed to appeal to him and he tried sawdust cigarettes again, finally giving up tobacco in disgust during the second week of treatment.

I had occasion recently to depend on Hyos-Sco-Deine as an anodyne and antispasmodic. Mrs. T. had an attack of gall-stone colic and suffered most intensely. I have given her prompt relief with a hypodermic of morphine and atropine. This time the tablets stuck in the tube and to "do something" for the patient while waiting for the tablets to be removed I gave her a syringe full of Hyos-Sco-Deine hypodermically and then attended to the tablets. By the time I had released them from the tube the patient was expressing thanks for the relief already obtained. She soon fell into a refreshing sleep, from which she awakened at the usual time next morning. On another and subsequent occasion, having eaten smoked white fish for supper, she was troubled with insomnia till past two in the night, when I told her to take fifteen drops in a little water. This she did and was soon sound asleep.

It is easy to multiply cases in my practice in the last two years where Hyos-Sco-Deine has been the main remedy depended on for restoration to health. I look upon it as essentially a new remedy having an action as a whole that cannot be deduced from a knowledge of the physiological action of the component alkaloids individually; just as we were taught concerning Dover's

powder having an action essentially different from the plus and minus action of its two main component parts. I look upon Hyos-Sco-Deine as a most valuable hypnotic, anodyne, antispasmodic, and nerve tranquilizer. Its value in restoring nerve tone rapidly, following the withdrawal of alcohol and narcotics, neutralizing insomnia, nervous irritability, cardiac failure, etc., is superior to any combination of bromides, chloral, or any member of the hypnotic group. I have used it with great satisfaction in the early stages of *la grippe* and in hysterical and neuralgic conditions that resisted large doses of the usual remedies.

The dosage is a matter of individual susceptibility and resistance ranging from five minims to thirty minims hypodermically or by mouth. I have not had occasion to use either the minimum or the maximum doses so far. The hypodermic method is most satisfactory where the patient is under the physician's supervision; although from the standpoint of effect the administration by mouth is satisfactory. After a course of two or three weeks treatment the abrupt suspension of Hyos-Sco-Deine is not followed, in my experience, by any symptoms indicating a drug habit newly formed, no constipation. At no time was nausea observed following its administration even in doses of twenty-five minims. The few cases reported above will suggest at once the wide range of usefulness of this valuable remedy.

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## OBSTETRICS.

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BY E. S. MCKEE, M. D., OF CINCINNATI, OHIO.

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*Fetal Malformations.*—Cooke (*American Journal of Obstetrics*) points out that some relation exists between the production of fetal deformities and the quantity and quality of the liquor amnii, and even claims that the diagnosis of these changes has a prognostic value. He has observed that this anomaly is frequently accompanied by mal development in the infant, and cites seven cases of oligohydramnios or polyhydramnios in which the fetus was malformed; and in five out of the series the condition was foretold before birth. Even the type of malformation, ac-

According to Cooke, can be foretold before birth, at least in a general way, for while deformities of the trunk seem to occur in cases of polyhydramnios, loss or shortening of the extremities is more usual when oligohydramnios is present. The amniotic bands which are believed to cause the latter deformities are not always present, and it is more probable that the malformations are due to the destructive atrophy of the parts, brought about by direct pressure of the uterine wall unrelieved by interposition of the normal amount of amniotic fluid. In connection with this theory there are still a number of points unaccounted for but the prognostic feature of the writer's statement.

So long as nothing can be done to correct the condition, however, it may be just as well for the medical attendant to guard the knowledge so acquired very closely, for it will without doubt prove unwelcome to the prospective parents and their kin. "Sufficient to the day is the evil thereof."

*Instrumental Premature Labor in Practice.*—O. Polano (*Munch. med. Woch.*) speaks of the experience of the clinic in Wurzburg with induction of labor. Among 1,952 cases of labor, with 119 contracted pelves, there have been 18 cases of induction of premature labor. He gives the comparative value of the three methods — bougies, rupture of the membranes, and metreurysis. The sterilized bougie, introduced between the membranes and the uterus, is most frequently used, but it is very uncertain, after two weeks' trial having proved useless. There is danger of infection and of hemorrhage from separation of the placenta. Rupture of the membranes is sure in the majority of cases, but fails in some. It is relatively slow, taking from seventy-seven to eighty hours to produce the desired effect. This delay is hard for the operator. The introduction of an inflated rubber balloon between the membranes and the uterus is the best method, according to the author's views. The balloon is sterilized, introduced with forceps, and then inflated. In the Wurzburg hospital the operation is done only for contracted pelvis, or for general diseases threatening the life of the mother. In order to obtain natural pains quickly it is best to use alternate pressure and relaxation, by letting the contents of the bag out. When the balloon is forced out the

mouth of the uterus may re-close, or there may be entire failure of contraction. After any one of these methods the uterus will usually expel the child without assistance, after the membranes have been ruptured. The author believes that the last method is far better than those in which the patient must lie for hours and days waiting for delivery.

*Curettage in Puerperal Infection.*—M. Demelin (*Bull. de la Soc. d'Obst.*, Paris) says that curettage in puerperal infection is by no means always either necessary or advisable. There are many conditions that are positive contraindications to the use of the curette. These are phlegmasia alba dolens, uterine or peri-uterine phlebitis, pulmonary embolism, visceral complications, and prolonged infections. In all these such interference is too late. In other cases, more energetic treatment is needed, as in generalized peritonitis and uterine perforations. Other forms make curettage useless or dangerous, as in primitive septicemia, in which curettage is followed by a rapidly fatal ending. A sub-acute intoxication follows the surgical opening of the vessels, acting as absorbing mouths. Perforation of the uterus during curettage is no imaginary danger in the softened condition of the infected uterus. It may be followed by severe hemorrhage. The natural barriers constructed against absorption by cellular infiltration or leukocytic reaction are destroyed, and a raw surface is left to absorb the poison. The curette should never be used blindly, but directed by the finger in the uterus. It creates furrows in the lining of the uterus and does not evenly remove the surface, so that decidual fragments may remain behind. In many cases intrauterine antiseptic injections are quite sufficient. Forceps for seizing placental remains are dangerous. The author prefers to make a digital curettage, under anesthesia, with rubber gloves. A complete exploration may thus be made without any danger of perforation or of traumatism to the organ.

*Diagnosis of Extra-Uterine Gestation by Roentgen Rays.*—Dichtenstein F. (*Munch. Med. Wochenschr.*). The value of the Roentgen rays in the diagnosis of extra-uterine gestation is insisted upon. A case of intra-abdominal tumor is reported in full, in which the diagnosis of extra-uterine gestation was verified prior



to operation. Sjagren, of Stockholm, has also utilized the Roentgen rays in a case in which the diagnosis clinically could be narrowed down to extra-uterine gestation, pregnancy in a double uterus, or pregnancy complicated by a movable myoma. A skiagram readily revealed the extra-uterine gestation. The writer considers that an X-ray examination should always be made in cases of abdominal tumor in women where the possibility of advanced extra-uterine gestation cannot be excluded with absolute certainty from the clinical examination alone. In advanced extra-uterine gestation the fetal parts and the lie of the child are observed on X-ray examination much more plainly than in uterine gestation, on account of the thinness of the fetal sac, the smaller amount of amniotic fluid, and the non-interference of the uterine walls and placenta with the rays.

*Separation of the Normally Inserted Placenta in the Course of Pregnancy.*—Jules Gaston, in the *Annales de Gynecologie et d'Obstetrique*, of November, 1906, gives a detailed resumé of this question. Many years ago Mauriceau reported in a treatise a certain number of observations of retroplacental hemorrhages. Following the appearance of this article were others by Peu, 1694, and Leroux, 1776. But it is J. L. Baudelocque who handles this question with especial frankness in his treatise on the art of delivery. Some years afterward Mme. Boivin and Mme. Lachapelle, however, denied the existence of this affection. Later writers since the observations of Winter, have made contributions to the study of placental separation. Among these observers are Tarnier, Mme. Henry, Pinard, Varnier, Ribemont-Dessaignes, and Champetier de Ribes. Gaston opens his discussion with a consideration of the etiology and pathogenesis. Under the first heading he considers anatomico-pathological causes and ordinary clinical causes. Under the symptomatology he discusses the general condition, abdominal pains, the condition of the uterus, and accessory signs. An interesting section deals with statistics. That on pathological anatomy, including reports on post-mortem examination, is of great interest. Gaston refers to the theory of Schickele, who thinks that the placental separation may take place in such a manner that small effusions of blood on the interior of

the decidua form progressively, so that coagulation follows, and with it arrest of hemorrhage. He believes that the hematomata act like a solid foreign body in bringing about pain and consequently uterine contractions. Gaston believes that in cases in which the patient is suddenly attacked by intense pain in the abdomen with all the signs of severe internal hemorrhage the uterus has not had time to react. He thinks that the separation precedes all of the phenomena of contraction.

*A Case of Criminal Abortion.*—A. Schonbek (*Zent. f. Gyn.*). The patient had given birth to three children spontaneously, and one miscarriage. The patient had been pregnant three months, and was brought to the hospital suffering from chills and fever. The os was still closed, and the uterus corresponded in size to that of three month's pregnancy. Because of irregular uterine hemorrhages the cervix was first dilated with Fritsch dilator and followed by the insertion of a laminaria tent. Chills and fever with vomiting the next day. Removal of fetus and placenta with finger and forceps, followed by lysol irrigation. Peritonitis progressive up to death three days later. Autopsy discovered beneath the liver an elastic bougie, broken, and 13 cm. long.

*Prolapse of the Umbilical Cord: Its Treatment.*—Dr. George B. Twitchell, of Cincinnati, Ohio, took the prize on this subject in the *New York Medical Journal*. This journal gives out a subject, and to the one of its readers who writes the best essay on this subject gives a prize of twenty-five dollars. The subjects are usually practical and the papers are often of very great real value. Dr. Twitchell has found the arrangement of the umbilical cord very good to withstand pressure without stopping the flow of blood, and that Wharton's jelly is a decidedly good protection of all the vessels. In every breech case there is a physiological prolapse of the cord which is ordinarily not compressed by the breech, but by the after-coming head. Considering all things, it is strange that the infant mortality from prolapse of the cord is so great, and it is probably true that this condition, properly treated, would not be so dangerous if it did not occur associated with other conditions unfavorable to fetal life. It occurs where the presenting part and the superior strait do not fit well, in the

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transverse and foot presentations, and in contracted pelvis where the head does not engage, and sometimes in multiparous women when the lower uterine segment is very loose. Where we simply deal with a presentation of the funis, the membranes being intact, we preserve the membranes, if possible, until full dilatation occurs; after this the treatment will be as in true prolapse. If the os is fully dilated and the membranes ruptured, the child should be delivered as quickly as possible. In transverse cases, of course, by podalic version; in head presentations occasionally forceps could be used, but as a rule, when the accident occurs, the head is so high that version offers an opportunity for much quicker delivery. We must quickly deliver when the umbilicus appears at the vulva. This same compression occurs in normal breech cases, and here an accepted rule is to deliver in less than eight minutes. In extracting the head, sole dependence should be made on Mauriceau's method. Forceps to the after-coming head is easily applied and saves much time. A clever operator can turn a child in less time than it takes to prepare a loop for a catheter, and deliver before a cord is replaced permanently if it ever is. When the os is not fully dilated we meet with a much more serious condition. Here the indication is to dilate as rapidly as possible, then turn. Manual dilatation is usually the best method. Very often the os can be dilated in a very short time. In multiparæ we may have a very soft cervix, and here the operation becomes very easy. It is possible that a Champetier de Ribes balloon could be used if the cord could be carried above it. In manual dilatation the cord can be protected by the hand during dilatation. Unfortunately, too, too many cases come to us after the cord has ceased to pulsate. Here of course the mother has to be delivered of a dead infant by whatever method is safest and best for her.

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NO CASE OF HEMORRHOIDS should be dismissed after merely an external examination. The possibility that the piles may be evidences of an obstruction higher up in the intestine or in the portal circulation must always be inquired into.—*American Journal of Surgery*.

## DERANGED UTERINE FUNCTION.

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BY JAMES A. BLACK, M. D., MORGANZA, PA.

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It is safe to say that to the average physician, who is confronted almost daily with the ordinary cases of suppressed and deranged uterine function, no other class of cases is so uniformly disappointing in results and yields so sparing a return for the care and time devoted to their conduct.

Patients suffering from disorders of this nature are usually drawn from the middle walk of life, and, by reason of the pressure of household duties or the performance of the daily tasks incidental to their vocation, are entirely unable, in the slightest degree, to assist, by proper rest or procedure, the action of the administered remedy.

Many of these patients, too, suffer in silence for months, and even when forced by the extremity of their sufferings to the physician, shrink from relating a complete history of their condition and absolutely refuse to submit to examination. Authoritative medical teaching and experience unite in forcing upon the attendant a most pessimistic view of his efforts in behalf of these sufferers under such conditions.

It is in this class of practice, where almost everything depends upon the remedy alone, that a peculiarly aggravating condition of affairs exists. A very limited list of remedies of demonstrated value is presented for selection, and I believe I am not wide of the mark in saying that, in the hands of most practitioners, no remedy or combination of remedies hitherto in general use has been productive of anything but disappointment.

Some time ago my attention was drawn to Ergoapiol (Smith) as a combination of value in the treatment of a great variety of uterine disorders. Its exhibition in several cases in my hands yielded such happy results that I have used it repeatedly in a considerable variety of conditions, and with such uniformly good results that I am confirmed in the opinion that its introduction to the profession marks an era in modern therapeutics. In the

treatment of irregular menstruation and attendant conditions I have found it superior to any other emmenagogue with which I am familiar, in the following particulars:—

1. It is prompt and certain in its action.
2. It is not nauseating and is not rejected by delicate stomachs.
3. It is absolutely innocuous.
4. It occasions no unpleasant after-effects.
5. It is convenient to dispense and administer.

The following clinical notes will afford a general idea of its action in a variety of cases:—

*Case 1.*—Mrs. ——— came to me presenting the following symptoms incident to a delayed menstruation: Persistent headache of a neuralgic character; dull, aching pain in limbs and lumbar region; cramp-like pains in abdomen, and considerable nausea. The menstrual period was overdue seven days, but as yet there was no appearance of flow. Her periods had always been occasions of intense suffering, but had never before been delayed. I began the use of Ergoapiol (Smith), with some misgiving, owing to the irritable condition of the stomach. One capsule every three hours was administered without any aggravation of the gastric distress. In twenty hours a normal menstruation was well under way; the flow was slightly increased over that observed on former occasions. The pains had subsided. Ergoapiol (Smith) was administered, one capsule three times a day, during the menstrual period, which terminated in five days. The patient was instructed to return for a quantity of the remedy several days before the next menstrual period. She did so, and following directions, took one capsule three times a day for three days before expected menstruation. She subsequently reported that during the period, lasting five days, there had been practically no pain, and the amount of flow was, as far as she could judge, normal.

*Case 2.*—Miss ———, aged thirty, has been a sufferer for years with dysmenorrhea. For about three years she had suffered with leucorrhea, particularly annoying after each menstrual period. Had undergone treatment at different times for the leucorrhea and dysmenorrhea, but had never experienced permanent

benefit. She had been obliged to spend two days of each period in bed. She consulted me about one week before her period. Examination revealed a purulent discharge oozing from os cervix and a rather large uterus. There was no displacement. She was put upon Ergoapiol (Smith), one capsule three times a day. The onset occurred one day earlier than expected, and was attended with considerable pain. The patient was, however, able to attend to her usual duties, a state of affairs such as had not been experienced for some years. At the onset of the flow Ergoapiol (Smith) was administered, one capsule every two hours. The effect was astonishing. In eight hours the pains had well-nigh subsided and there was practically no discomfort, except some pain in back.

*Case 3.*—Miss ———, aged twenty-one, had suffered for two years with irregular and painful menstruation. Had commenced to menstruate when sixteen, menses being very scanty, but regular and accompanied with but slight degree of suffering. Was never of a very robust physique, but in the main healthy. When about nineteen, considerable nervous trouble was inaugurated by grieving over a great bereavement, and the menses became more and more painful. The anguish became such a horror to her that she frequently resorted to morphine, partly to allay pain and partly to procure sleep. Fortunately she had not, as yet, contracted the habit, but the tendency was undoubtedly in that direction. When first consulted by her, examination was not granted. Menses appearing shortly afterward, was called upon to afford relief. Flow was very scanty and clotted. There was sleeplessness, terrific headache, pain in back, constipation, etc. Ergoapiol (Smith) was administered, one capsule every three hours. Flow was considerably increased, there was a gradual lessening of all the suffering, and almost complete relief in twelve hours. This young woman has been placed upon Ergoapiol (Smith), one capsule twice daily for one week preceding appearance of menses, and has passed through several periods with very little suffering. An examination made recently showed a marked retroversion and very sensitive cervix. A properly applied supporer will doubtless work



considerable benefit in her case, but it cannot be disputed that the comparatively easy menstruations occurring recently, in spite of the displacement, was due entirely to Ergoapiol.

*Case 4.*— Miss ———, aged eighteen, had always been regular in menstruating. Could get no history of any previous disorder within patient's knowledge. Contracted a heavy cold about time of menstrual epoch, and was much alarmed by non-appearance of flow. Discomfort was not marked. Ergoapiol (Smith), one capsule three times a day, was prescribed. Reported later that flow was established in twenty-four hours after treatment was commenced. The delay in this case was about four days.

*Case 5.*— Mrs. ——— consulted me, giving the following history: Three months previously had had a profuse uterine hemorrhage occurring about the time of menstrual period. As she had for a number of years menstruated only at intervals of about six or seven weeks, the fact that menstruation had been suspended for six weeks before the date of trouble was not especially significant. The hemorrhage, which was at no time alarming, had continued for several days. Since that time there had been an almost constant wasting and at times a considerable flow. Her condition was practically invalid. Examination revealed a gaping os, a cervix exceedingly tender and abraded, and a large uterus. Before resorting to curettement it seemed advisable to try other measures. Ergoapiol (Smith), one capsule every three hours, was prescribed. In about twenty-four hours there was a decided increase in the discharge, which consisted of clots and considerable debris. There were some pains of a cramp-like nature. The discharge began to grow less in about four days, and ceased entirely in one week. There was a marked improvement in general condition. Local treatment entirely removed the tenderness and abraded condition of cervix. Ergoapiol (Smith) was administered several days before next menstrual period and resulted in a very satisfactory period. In this case it appears to me the remedy saved the patient the ordeal of curettement, acting as a prompt uterine stimulant. Her condition locally and generally has since steadily improved.

## THE AILMENTS OF THE AGED.

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BY W. T. MARRS, M. D., OF PEORIA HEIGHTS, ILL.

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THE uric acid diathesis and arterio-sclerosis are the common heritage of most people as they travel the western slope of life. The symptoms may be protean in character, and the sufferer may have enlarged prostate with cystitis, albuminuria, glycosuria, dyspepsia, gout, rheumatism, or perverted function of every gland and organ in his body. Whatever the symptoms may be, the cause in the beginning was an insufficient elimination of mineral and toxic products, which in turn may have been due to a faulty metabolism.

Old age is a sort of ossifying process, a gradual change from animal to mineral matter. This is the inherent tendency on the part of nature, but is doubtless augmented by diet, habits, environment, etc. More attention directed toward the prevention of this calcifying process would perhaps very materially prolong many lives. It is an unwritten belief quite common among physicians that the man who has reached fifty may with impunity take alcohol daily in moderation. This I contend to be as untenable in theory as it is damaging in practice, and will thus appeal to any one who for a moment considers the physiological effect of alcohol, immediate and remote. Stimulating foods, drugs, and beverages calculated to raise arterial tension are contraindicated where there is an arterio-sclerotic tendency. Foods and drugs that nourish without producing stimulation come nearer meeting physiological requirements. Fruits and vegetables should be eaten freely. The malic acid contained in apples and the citric acid of grapes are very beneficial. The lactic acid contained in buttermilk is opposed to chalky formations. This acid was a few years ago heralded as the "elixir of life" for the aged and infirm. The value of drinking pure water in copious quantities cannot be overestimated. Deleterious products are thus mechanically swept away as well as being in some measure diluted.

A great many uric acid solvents have from time to time been tried, but soon "the wind has blown them all away." In the

elaboration of remedies for this purpose clinicians and pharmacists have made the mistake of thinking the human body an animated test tube. The many fluids of the body along with their varied character must always be considered when administering any drug for a special purpose. The writer has had the best results in treating these affections of old people from a combination, the following being the formula: Repurified calcium carbonate, 10 grains; lithium carbonate, 1 grain; colchicine, 1-100 grain, in an aromatic combination. I supplement it with some hepatic stimulant. Calomel is a most excellent one, although acting indirectly; but as so many people are prejudiced against mercury I frequently use this combination: Repurified magnesium sulphate, 60 per cent., and sodium tartrate, 25 per cent., combined with the tartrate of lithium and colchicine, 1 grain of the former and grain 1-250 of the latter to each dose in effervescent combination as above. These things seem to eliminate residues and prevent deposits better than anything I have employed for that purpose.

Old people require more sleep than they usually take. Insomnia and waking early in the morning are partially due to habit and also more or less dependent upon a rigid, unyielding condition of the blood vessels in the brain. The rather imperfect anastomosis of the cerebral arteries makes embolism more frequent when the blood vessels become somewhat hardened.

The person who feels that age is surely and silently creeping upon him should cultivate a relaxation from worldly cares. Moderation should be the keynote of his life. He should also cultivate the social amenities lest he grow moody and introspective. He should try to live quietly, happily, and optimistically. Life may be considerably prolonged if a correct mental and physical method of living were religiously carried out. There are no valid reasons why the man of good physique and good inheritance should not reach the century mile-stone. The same of course applies to women.

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A GRADUALLY INCREASING ANEMIA in an elderly person, without any other symptoms, is highly suggestive of a latent carcinoma, often in the intestine.—*American Journal of Surgery.*

## *Abstracts.*

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### COLLOIDAL SILVER, OR COLLARGOLUM.

S. LEON GANS, M. D., Instructor of Genito-Urinary Diseases in the Medico-Chirurgical College and Assistant Genito-Urinary Surgeon to the Medico-Chirurgical Hospital, Philadelphia, publishes in *Medical Bulletin*, Feb. 1907 his extensive experience with colloid silver in acute gonorrhea. From his study of one hundred and thirty-two cases he concludes: Instillations of the drug never caused subjective symptoms of irritation. The most striking feature in the entire series was the absence of epididymitis in all cases. There were no complications in any case, unless posterior urethritis is so called; and this was minimized. All cases ran a much shorter course than under other plans of treatment. The long stage of decline was conspicuous by its absence. There was no sudden cessation of the acute discharge followed by a persistent mucoid discharge, as with many cases treated by the old irrigation methods.

Three to five per cent. collargolum solutions with mucilage sassafras med., being preferable to watery solutions, were injected as soon as the patients presented themselves. The instillation is made with the greatest care and gentleness four times a day, immediately after urination, the instillator being placed just within the compressor urethra muscle. This insures medication of the infected membranous and prostatic urethra; if introduced farther, the instillator deposits the fluid on the base of the bladder, which is rarely at fault. The solution is held five minutes, the meatus being compressed laterally. The urine should be watched, and any persistent turbidity not due to phosphates or urates is an indication to decrease the strength of the solution. Number and concentration of the injections should be adapted to the individual needs.

Thirty minutes after a five per cent. collargolum solution had been thrown in and held for five minutes, a normal urethra was examined with a straight tube endoscope with an electric bulb. The mucous membrane was found to be stained brown and to have

a peculiar lustre, and small areas of normal tissues were apparent at irregular intervals.

In his work on the Russo-Japanese war von Oettingen describes a new method of wound dressing which he employed in thousands of cases. He and his colleagues in the field hospital never attempted to cleanse the wounds; they painted the surrounding area with a solution of mastic, placed a collargol tablet into the lesion, covered it with a sterile cotton pad, and applied a bandage. The mastic "arrested" the bacteria on the skin and prevented their migration into the wounds, especially because the dressing was immovable. The tablet immediately dissolved and penetrated into the crevices, whence the silver was absorbed. Collargolum has an indubitable antiseptic action and does not coagulate blood serum, so that the secretion flows off freely till the wound is clean; then a scab forms which soon drops off from the cicatrix.

He also used a three per cent. collargol-lactose dusting powder, which is even cheaper than iodoform, as well as 1:500 to 1:1000 solutions for irrigating facial sinuous wounds, the bladder, the urethra, etc. At laparotomies a 1:100 to 1:500 solution was poured into the cavities.

Collargol is a surgical antiseptic to which no objection can be raised; it is non-toxic, non-irritant, and obviates the need of working in phenol or lysol odors. The bichloride in the first aid packages should be replaced by collargolum, this giving a non-toxic antiseptic bandage kit.

In the *Annals of Surgery*, Jan. 1907, Dr. J. E. Blake reports laboratory experimentation with collargolized catgut, which shows that it has a marked inhibitory influence on bacterial growth.

The catgut is prepared as follows: Four coils of catgut, each containing ten strands, are wound on four glass slabs and placed for a week in a jar containing a two per cent. collargolum solution. The jars are shaken once or twice in the intervals. The slabs are then taken out, washed in sterile water till the excess of collargol is removed, and placed in ninety-five per cent. alcohol for fifteen to thirty minutes. Then the individual strands are

wound on separate spools, under aseptic precautions, and preserved in ninety-five per cent. alcohol till used.

Dr. Pilcher adds: Silverized catgut has since been used in all my operations (more than 500) at the Seney Methodist Episcopal Hospital. It has continued to give me abundant satisfaction and to justify all expectations. There has been a notable absence of infective accidents in an active general service which includes nearly every variety of operative interference. Silverized catgut has become established as a permanent factor in our operating room methods.

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## ***Records, Recollections and Reminiscences.***

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### **SPECIAL NOTICE**

*The 17th Annual Re-Union of United Confederate Veterans will be held in Richmond, Va., May 30th, 31st, and June 1st, 2nd, and 3rd, prox., and the 10th Annual Meeting of the Association of Medical Officers of the Army and Navy of the Confederacy will be held at the same time and place. Dr. C. W. P. Brock, former Chief Surgeon of Kemper's Division, A. N. V., Chairman, with an able and energetic Committee of Arrangements consisting of former Medical Officers of the Confederate Service and younger members of the profession in the former Capital of the Confederacy earnestly hope that every surviving Confederate Medical Officer who possibly can will attend.*

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### **CIRCULAR LETTER.**

208 Sixth Ave., North, Nashville, Tenn.,

March 31, 1907.

*My Dear Doctor: The Seventeenth Annual Re-Union of United Confederate Veterans will be held in Richmond, Va., May 30 and 31, and June 1, 2, and 3; and the Tenth Annual Meeting of the Association of Medical Officers of the Army and Navy*

*of the Confederacy will be held at the same time and place. The meetings of the Association of Medical Officers will be held in the Hall of the Y. M. C. A., of the Street Railway, quite near the Auditorium in which the General Re-Union exercises will take place, and at such time as will least conflict with the most interesting features of the General Re-Union.*

*While the objects of the Association of Medical Officers are largely social and for the purpose of again bringing together comrades and associates of trying and most eventful days, a more important one is to collect and place before the public as much as may be possible while the participants are yet alive of the important facts pertaining to the remarkable history of the Medical Department of the Army and Navy of the Confederacy. Among the first houses destroyed by fire at the evacuation of our Capital by our Army was the two in which were stored the Records, Reports, and Papers of the Surgeon-General; and although much of the historical facts of the great war between the States from 1861 to 1865 have found a place in the many volumes comprised in the "Compilation of the Official Records of the Union and Confederate Armies," published by the National Congress, the details pertaining to the Medical Department of the Confederate Army and Navy are very meager indeed.*

*Our Association so far has been the means of establishing some very important historical facts, and of correcting some very material errors, and now ere it is too late, as our ranks are so rapidly thinning, and our memories are becoming dimmed by the relentless movement of time, more especially as this year the meeting will be so accessible to many of the survivors who were active participants in the important, brilliant, self-sacrificing, and heroic part borne by the Medical Staff, it is sincerely hoped that more will be accomplished than at any preceding meeting.*

*"All members of the medical profession who served as Surgeon, Assistant Surgeon, Contract Physician, or Acting Assistant Surgeon, Hospital Steward, or Chaplain, during the late war between the States, shall be eligible to membership as Members, and the Secretary shall be instructed to enroll their names as such when application in writing is furnished, together with a state-*



ment of the official position and rank held in the Army or Navy by the applicant."

"All Confederate Veterans who are Regular Doctors of Medicine are eligible to membership as Associate Members; and all Sons of Confederate Veterans who are Regular Doctors of Medicine shall be eligible to membership as Junior Members." They all have the same rights and privileges on the floor of the Association at its meetings, and only differ in name to indicate the several classes forming our Association. The membership fee is one dollar, and the annual dues paid by all only at subsequent meetings which they attend is one dollar.

The Members had opportunities of making a part of the magnificent history of our Medical Department; the Associate Members had the opportunity of being present at the making of that history, and to them may remain the recollection of some important facts pertaining to that history that have not yet been placed on the printed page; and to the Junior Members will soon be left, and to them alone, the duty of preserving and perpetuating all the important facts of that history which may be known.

Then, if you are eligible to either Membership, Associate Membership, or Junior Membership, it is sincerely hoped by all who have an interest in these matters, that you will if you possibly can, attend the meetings of the Association, and give your help, aid, and assistance in adding whatever you can to the facts of a history of which every man of Southern feelings may well be proud.

Gallant, heroic, and enviable as were the acts and deeds of the rank and file of the Confederate Army and Navy, so also were those of the matchless and unparalleled corps of Confederate Surgeons and their assistants both in field and hospital work. The ports of the world closed against them, medical and hospital supplies declared contraband of war by a powerful foe equipped with a large navy, depending on an originality most remarkable and unsurpassed, developing the resources of their fields and forests, their fertile hills and dales, their mountain sides, valleys, and rolling plains, with kindly hearts, tender hands, and untiring devotion to duty, with an indomitable will, unflinching courage, and tireless



*energy they cared for the sick and wounded of their 600,000 comrades, needy, ill-clad, and most meagerly fed, in heat of summer and cold of winter, by day and by night, in sunshine, in storm, in snow or rain, while contesting in a struggle of life and death with nearly three millions of their fellow-men, well equipped and armed, and with the resources of the whole world at their beck and call. They had also to provide medical and surgical care for 270,000 of their adversaries who had been captured, and that they did so most humanely and successfully was attested by the fact that 4,000 less of these died in their hands than met a like fate among the 220,000 of their comrades who were in the hands of their enemies.*

*A generation has come and passed since those eventful days, and there are yet a few survivors, and although their locks are blanched with the passing years, and their cheeks furrowed and their forms bending with the weight of days, it is to them we can yet turn for a correct statement of such facts as will illustrate this particular phase of that remarkable period. Then, while we are yet permitted to linger on the stage of life's action, and before "taps" are sounded for us, let us meet again together, and with our sons and our associates of those days, make an effort to place before the world acts, deeds, and accomplishments in which we may well feel a just pride. This is a duty we owe to ourselves, and a duty we owe to those who have already gone to their reward.*

*To those who are now or at the coming meeting may become members of our Association is this duty left, a duty incumbent on them for the sake of their associates who are no more, and as a legacy for their descendants and ours. All that is asked is that the true facts of our history during those days may be preserved. Each and every one who can come is most respectfully requested to prepare a paper containing some fact of the past that he may deem worthy of preservation. Short, practical statements of what you may have observed at some period of your service will be most heartily appreciated. Your personal experiences, whether in field, in hospital, or in prison, cannot but be interesting, and by doing your part you will add to the facts that have already been placed in a proper light by means of our Association.*

*All who will prepare a paper, essay, or report of cases or in-*

*cidents are requested to inform me prior to May 20, by letter or postal card, addressed to me at Nashville; after that date and prior to the meeting, the information can be sent to Dr. C. W. P. Brock, 206 E. Franklin St., Richmond, Va., Chairman of the Committee of Arrangements, so that a program can be prepared.*

*Among the features of the coming Re-Union may be mentioned the unveiling of the equestrian statue erected in honor of Gen. J. E. B. Stuart, on Thursday, May 30, and the one erected in honor of our President Jefferson Davis, on Monday, June 3. The address of welcome to our Association will be delivered by Dr. Stuart McGuire, of Richmond, a son of the late Dr. Hunter McGuire; and the response by some member of the Association. The Annual Address will be by the President of the Association, Dr. Ernest S. Lewis, of New Orleans, La. Sincerely hoping that this coming meeting may be agreeable, pleasant, and enjoyable to all who may be present, I desire to remain,*

*Very truly and respectfully,*

*Deering J. Roberts, M. D., Secretary.*

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## Selected Articles

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### TENDON TISSUE VERSUS CATGUT.

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BY N. SENN, M. D., PH. D., LL. D.

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*"The absorbable aseptic catgut ligature is Lister's greatest invention." — Professor von Nussbaum.*

Few physicians who have received their medical education and training since aseptic surgery came into general use can fully realize the force of the meaning, and much less the practical significance of the above quotation from the pen of one of Germany's greatest surgeons of modern times. Those of us who were born early enough to attend the surgical clinics under the old regime comprehend fully its import. We shudder when we think of the old ligature and the many disastrous complications

which followed its employment. It consisted of a silk thread of convenient length, and the only instruction we had to follow in preparing it for immediate use was to wax it thoroughly to render it more secure. After tying the vessel with sufficient force to crush the two inner coats, one end of the ligature was cut short to the knot, the other was brought out through the wound and fastened on the surface with a strip of adhesive plaster.

After an operation requiring ligation of one or more large vessels, the elimination of the ligatures was one of the most important events in the after-treatment of the case. Suppuration was regarded as a favorable indication in hastening this process and in preparing the wound for speedy healing by granulation. During operations, for convenience' sake, many surgeons were in the habit of holding the ligatures between their teeth; others more tidy placed them in the button hole of the lapel of the coat. Centuries of experience with the old ligature sufficed to teach the surgeons that the material employed had to be eliminated or removed before the wound could heal. We did not know at that time why suppuration was so constant, thrombo-arteritis, thrombo-phlebitis, pyemia, erysipelas, hospital gangrene, sepsis, secondary hemorrhage so frequent. In the light of the teachings of modern aseptic surgery, we know that these grave wound complications were caused by unclean ligatures, sponges, hands, and instruments.

It was the difficulty encountered in rendering ligature and suture material aseptic that retarded the early progress of aseptic surgery. Hand disinfection and sterilization of suture and ligature material were the stumbling-blocks which for more than two decades delayed the perfection of aseptic methods in the operating room. An immense amount of genius and energy has been expended in perfecting this part of the aseptic surgical technique. The idea that silk ligatures could remain in the system indefinitely without any ill results, or that they possibly might become absorbed, engaged the attention of London surgeons during the time of Sir Astley Cooper in 1815. Lawrence and Cardarine made experiments on animals and each of them reported a successful case. Encouraged by these results, Lawrence, Watson, Hodg-

son, Cumin, and a number of Neapolitan surgeons tried this method in man, but without exception the ligatures which had been cut short to the knot maintained suppuration until they were eliminated or removed. Sir Astley Cooper then tried catgut, believing that by using animal material the chances of absorption or encystment of the ligature would be enhanced.

In his first case the healing of the wound was completed on the twenty-first day; in another patient who was eighty years old, the wound took but four days to cicatrize, and in neither case did the ligature ever reappear. Norman made use of the same method, but was not so fortunate. The repeated failures with the same material in the hands of other operators soon led to its abandonment. Galen had used violin strings as a suture material with the same expectations, but was similarly disappointed. A year before Sir Astley Cooper advocated the substitution of animal material for silk, an American surgeon, Physick, of Baltimore, according to Jameson and Dorsey, conceived the idea of using tanned deer skin for the same purpose. He gave to his deer skin ligatures as much as two lines in breadth, and increased their tensile strength, to a greater or less degree, by drawing them between the finger-nails. Malgaigne commented on the ligatures of animal tissue as follows: "If we admit that these ligatures, when left around the artery, do not act the part of foreign bodies, that may be absorbed by the system and are not necessarily obliged to be expelled from it at a period sooner or later, there is no person who cannot comprehend at a glance what advantages they would give to the patient, but before adopting them in surgery requires new experiments; and also, that the results mentioned by Jameson should be confirmed by other practitioners."

More than half a century ago two American surgeons, Paul Eve, of Nashville, and Christian Linde, of Oshkosh, made use of split deer tendon as a ligature material; but the results appear not to have been encouraging as this practice found no imitation.

#### THE ASEPTIC ANIMAL LIGATURE.

"The treatment of hemorrhage is the foundation of all surgery." — *Otto Weber*.

We can readily understand now why all trials with animal

tissue as a suture and ligature material failed before asepsis was made the essential feature of the preparatory and operative technique. The employment of aseptic precautions and the use of sterilized animal tissue as a material for ligatures and sutures have made surgery what it is to-day, nearly a perfect art. Certainly, Lister's greatest invention, the absorbable aseptic catgut ligature, has met Otto Weber's expectation of the perfection of surgery expressed in the sentiment, "The treatment of hemorrhage is the foundation of all surgery." To this we must add that the same material employed so successfully in definitely arresting hemorrhage by ligation of the bleeding vessels serves an additional, almost equally important, purpose in enabling the surgeon to unite similar anatomical parts severed by accident or operation by the employment of the buried absorbable suture.

To Lord Lister belongs the credit of having shown the way to the successful employment of animal tissue as a ligature and suture material. His original method of sterilizing catgut has been abandoned long ago, but the principles he taught and practiced remain unshaken by subsequent investigations and experiments which slowly but surely led to more simple and reliable methods of sterilization. Chemical agents, dry and moist heat, all have had their advocates in the sterilization of catgut, and by a slow process of evolution we have finally succeeded in rendering the material practically sterile without impairing its tensile strength. During the transition stage from inabsorbable to absorbable ligature and suture material every surgeon has had in his practice his share of failures. The frequency with which stitch abscesses occurred after operations performed under strictest aseptic precautions induced many of the most noted operators to abandon catgut and return to silk as the exclusive material for ligatures and sutures. There was a time when this backward step in surgery was justifiable. The sterilization of silk by boiling and reboiling assures absolute asepticity, and in the great majority of cases, especially if fine threads are employed, ligatures and buried sutures of this material become encysted. But exceptions do occur in the practice of the most painstaking surgeons.

Nature abhors the presence of foreign bodies in the tissues, and the cases are by no means rare in which after a primary wound healing the silk is eventually eliminated perhaps weeks, months, or years after the apparent complete repair of the wound. Other surgeons preferred metallic sutures to either silk or catgut. Owing to the ease with which wire can be sterilized and kept aseptic, and with a view of effecting the mechanical union with the nicest accuracy and securing an unyielding hold on the approximated tissues, metal is more obnoxious to the living tissues than silk. The latter permits of infiltration of its meshes by new tissue and yields readily to movements of adjacent parts, while the compactness and resistance of the former make it an uncompromising alien to its immediate neighborhood. The surgeon who relies on the metallic suture, gold, silver, or bronze aluminum wire in holding living tissues in permanent apposition by this mechanical aid will sooner or later learn to his sorrow that nature does not tolerate such interference for any length of time. The tissues included in the suture are in the course of time invariably cut through by the unyielding ring, which, at best, becomes encapsulated somewhere in the vicinity of the place where it was applied, but frequently seeks the easiest and nearest route to a surface from where it can escape or be removed from the unfriendly surroundings. These remarks apply with special force to hernia operations. The ideal suture is the one which furnishes the requisite tensile strength for a sufficient length of time for the united parts to form an organic unyielding union, and after having fulfilled the mechanical indications is removed by absorption and substitution of living for dead tissue. Silk, wire, silkworm gut, horse-hair, and other inabsorbable substances will continue to command the confidence of the profession as material for removable sutures, but cannot hold their present position in surgery as buried sutures.

In the abdominal cavity silk is my favorite suture and ligature material, and if the wound heals by primary intention, very seldom gives rise to late complications, as the foreign substance is surrounded by tissues noted for their intrinsic power to effect speedy and firm encapsulation. The employment of metallic

sutures will at no distant time be limited to the suturing of bone. The ideal material for ligatures and buried sutures of the future will be animal tissue made sterile by effective, safe bactericidal agents, which not only destroy the existing bacteria, but which at the same time have the power to neutralize the toxins which they may have generated in the dead tissue, and which possess the necessary tensile strength to meet the mechanical indications for a sufficient length of time until their presence and function have become superfluous by the completion of the process of repair, when they are removed by absorption and their space occupied by living tissue.

For centuries surgeons have been in quest of such a material, but it was reserved for Lister to lead the way to a satisfactory solution of this important scientific and practical problem. Of all animal tissues, catgut has had the most extended trial, and has come into general use wherever surgery is practiced. Other animal tissues have been recommended and used, but never became a serious rival of catgut. The parietal peritoneum of the larger domestic animals has been cut into strips and twisted into cords to serve as ligatures. Mr. Barwell in tying large arteries used a broad ligature made of the strong middle coat of the ox's aorta. In sixteen cases it proved successful. He believed that this tissue is not absorbed, but is organized and becomes a part of the surrounding tissues. In his first communication on the use of catgut Lister entertained the same belief, but such views in regard to the fate of any of the dead animal tissues implanted into the living tissues of man or animals have been abandoned long ago.

In 1878 Ishiguro, Ex-Surgeon-General of the Japanese Army, reported favorably on the use of whale tendon as a substitute for catgut. His paper attracted considerable attention in Germany and Holland, but the subject was soon lost sight of and has not been revived since. In 1879 Gridlestone, of Australia, published his first paper on kangaroo tendon as a superior animal tissue for ligatures and sutures. H. O. Marcy became the champion of this material in this country two years later, and has used it exclusively since. It was through his vigorous writings



and brilliant example that the kangaroo tendon ligature and suture became a strong competitor of catgut in the practice of many American surgeons. It is only proper to state here that when I visited Australia two years ago I made inquiries and examined different samples of the so-called kangaroo tendon, and found that most of the material imported was not kangaroo tendon, but the tendon of a much smaller but more numerous animal, the wallaby. The tendon of the kangaroo is very coarse and the smallest fibers obtainable are the size of an ordinary knitting needle, while the tendon of the wallaby is made up of much finer fibers.

In 1884, H. W. Dudley, in a paper published in the Transactions of the Texas Medical Society, entitled, "Animal Ligatures and Sutures; Tendons of the Lepus or Mule-Eared Rabbit as a Means for the Arrest of Hemorrhage, and the Closing of Surgical Wounds," advocated the employment of the split tendons of the jack rabbit. I have seen no mention of anyone else using this material. It is quite certain that some American surgeons have used the sterilized deer tendon, but of this I have no reliable information. From these notes we must draw the conclusion that catgut is the only animal tissue that has held the confidence of surgeons from the dawn of aseptic surgery until the present time.

#### PREPARATION OF RAW CATGUT.

What is catgut? How this material was ever called by this name is unexplainable, because catgut literally means the intestine of a cat, while the catgut in use is made of the small intestines of the sheep.

The fresh intestines are cleansed and macerated for twelve hours in running water; then the inside and outside surfaces are scraped with a dull knife, the intention being to remove the mucosa, the transverse fibers of the muscular coat, and the peritoneum, leaving only the subserous tissues with a small part of the longitudinal fibers. After treating the remaining middle layer for a time in a solution of carbonate of potash, and after careful rinsing, the moist threads are twisted on a rope-maker's wheel; then they are sulferized, dried, polished with glass powder,



and finally rubbed with olive oil. It requires no stretch of imagination to realize that in the mechanical preparation of the intestine, parts of the intestinal coats which should be removed remain. In examining numerous transverse and longitudinal sections of raw catgut in the surgical laboratory of Rush Medical College, we had no difficulty in finding remnants of the mucous lining and transverse muscular fibers. The material is taken from a part of the animal always the seat of pathogenic bacteria. What remains or should remain of the intestinal wall are the longitudinal muscular fibers and the loose meshwork of the sub-peritoneal connective tissue. By twisting the tensile strength of the material is increased. The looseness of the tissues renders them highly hygroscopic, which can be readily demonstrated by immersing raw catgut in a warm physiologic solution of salt. The threads increase in bulk, and thereby their elasticity is increased. This is perhaps no disadvantage when catgut is used as a direct ligature, but when employed as a ligature *en masse* or as a suture, its mechanical reliability suffers. The tetanus bacillus and its spores, so common in meadows and barnyards, are common inhabitants of the intestinal canal of sheep, and in case of imperfect removal of the mucosa and its glandular appendages are very liable to remain in the tissues out of which catgut is made. The spores of the tetanus bacillus are very resistant to all methods of sterilization, and I have personal knowledge of several cases of tetanus which could be traced to no other source but the catgut employed in the operation. Ordinary catgut has not a good reputation in the suturing of wounds when it becomes necessary to secure accurate coaptation of important structures by mechanical aids for at least two or three weeks, as, for instance, in radical operations for hernia. By the absorption of the tissue fluids the sutures swell, lose their tensile strength, become more elastic, and yield enough to interfere with an ideal healing of the wound. It is for this reason that silk and metallic sutures take the precedence of catgut in the practice of many surgeons in closing abdominal wounds, and in all operations in which the mechanical aids must be relied upon for at least two or three weeks in obtaining an ideal wound healing.

Muscle tissue, of which catgut is largely composed, is a poor material to rely upon as a suture. The anatomic arrangement of the connective tissue of the subperitoneal coat is not much better, as its elasticity is greatly increased by the imbibition of the tissue fluids. Finally the twisting of the muscular and connective tissue fibers is the most serious objection to the make-up of the catgut suture. Catgut can be relied upon as a ligature material, as in my experiments "On Cicatrization of Blood Vessels," made in 1884, I ascertained that obliteration in arteries takes place in from four to seven days, according to the size of the vessel, and in veins in from three to four days. As a material for buried sutures it is inferior to more permanent animal tissue, as during the same series of experiments it was shown that medium-sized catgut is completely absorbed at the end of fourteen days, and of course long before the expiration of that time has lost its function as a mechanical support. More durable catgut, such as chromicized catgut, overcomes these objections only to a certain extent, but even this, the most resistant preparation of catgut, has its serious defects when it becomes necessary to make use of sutures which must hold the tissues in uninterrupted, accurate contact for three or more weeks, in order to obtain a satisfactory healing of the wound.

#### TENDON TISSUE.

The compact, non-elastic tendon tissue of some of the larger land and sea animals furnishes the most desirable and useful material for buried sutures and ligatures. The primitive fibrils of firm non-elastic tendons are arranged longitudinally, and will not yield under the traction to which they are exposed when employed as sutures or ligatures. The dense connective tissue of which tendons are composed is but scantily supplied with blood vessels, and is less subject to microbic invasion than any other tissue in the body, with the exception of cartilage. The comparative avascularity of tendon, the compactness of the fibers of which it is composed, resist cell invasion and absorption for a much longer time than muscle, elastic and loose areolar tissue. The tendon suture of the same size as catgut and prepared in the same manner can be depended upon to serve much longer as an efficient mechanical support than catgut.

## TENDONS OF ARCTIC SEA ANIMALS AS SUTURE MATERIAL.

I became interested in tendons of large sea animals as a substitute for catgut last summer during my trip to the heart of the Arctic with Commander Peary, the well-known explorer of the Arctic regions. I went with him as far North as Etah, the most northern habitation of the Eskimos, 650 miles from the North Pole. We visited all of the settlements from North Star Bay to Etah, and I was thus given a rare opportunity to study the life, habits, and manners of the aborigines of that region. The skill of the Eskimo women as seamstresses attracted my attention. They prepare the skins of the fur-bearing animals and convert them into clothing and boots. They make their own thread out of the tendon of the norwhal. The norwhal (*Monodon Monoceros*) is a huge sea beast, ordinarily twenty feet in length. On each side of the spine is a broad, long tendon which furnishes the sewing material. After drying this tendon the women chew it and strip it into threads of suitable size for their different kinds of sewing. Boots made by these women are water-tight, and only the most prolonged and hardest kind of usage has any effect on the seams. Delicate threads a yard in length are the pride of the Eskimo women in sewing the fur coats and trousers for themselves, their children, and their husbands. I was not slow in appreciating the fact that threads made of the norwhal tendon are durable, and would in all probability on trial prove to be an excellent substitute for catgut. The norwhal appears to select the upper part of Inglefield Gulf as a favorite feeding ground during the short summer months. When we arrived in that part of the Arctic waters, the natives had killed a young norwhal on that day and brought it on board of our ship. When the animal was cut up, I secured the entire tendon on one side of the spine as wide as a hand and at least four feet in length. I hung it up in the rigging and after it was dried the women chewed it and stripped it into threads. On my return I iodized the threads by immersing them eight days in a one per cent. aqueous solution of iodine, and began to use them in my operative work at St. Joseph's Hospital. The results were all that possibly could be desired. In only one case out of more than fifty did a stitch abscess form,

and the infection in this case could be traced to careless handling of the sutures. I studied the time of absorption of the material by using different sizes of the threads as deep removable sutures which were removed from one to three weeks after the operation. At the end of one week the sutures showed but slight changes from absorption. At the end of two weeks they were still firm, but the part of the ring in touch with the soft tissues was reduced about one half in size. At the end of three weeks the sutures had undergone advanced absorption, but were strong enough to hold the parts which they embraced in accurate coaptation. The fresh tendons of the sea animals in the Arctic regions are not only aseptic but slightly antiseptic, as these animals imbibe iodine from the seawater and ingest it with their food. This material could be obtained for a trifle from the natives through the agency of whalers who visit the east coast of Greenland annually. One day near the mouth of Inglefield Gulf, our party killed fifteen walrus and one seal, and I secured enough tendon material for trial. The tendons are disposed like in the norwhal on each side of the spine. The fibers, however, are coarser and cannot be split to the same length. Properly prepared and sterilized, the tendon furnishes, however, an excellent suturing material. The walrus (*Trichechus rosmarus*) is an immense marine mammal, which weighs on an average one ton and is an inhabitant of the Arctic regions. A few pounds of powder or a few sides of bacon would purchase from the natives enough tendon material to supply one of the largest hospitals for a year.

Whale tendon I obtained at a whaling station on the coast of Labrador, where its commercial value is almost *nil*. The sperm whale and the baleen or whalebone whales (*Mysticete*) have become quite rare even on the coasts of Labrador and Greenland, as the aggressive chase of the whalers has driven them to more inaccessible regions. The day before we called at this whaling station, three of these sea monsters were brought in. I was given a large slab of tendon tissue from the back, and I dried it in the rigging of the ship. The Sisters at the St. Joseph's Hospital found it impossible to split it in finer threads than those of the coarsest kangaroo tendons. I have made quite an exten-

sive trial with these coarse sutures, properly iodized, in operations for the radical cure of hernia, with the most satisfactory immediate and remote results. After a somewhat extensive experience with the tendons of these sea animals as a suture and ligature material, I would accord the norwhal first, walrus second, and the whale the last place. I am satisfied that the tendon tissue of these sea animals of the Arctic regions is far superior to the tendon tissue of land animals, from anatomic and bacteriologic standpoints, and hope that it will receive the attention to which it is entitled by its intrinsic qualities. Finally, I am convinced that from a commercial, scientific, and practical point of view, tendon tissue is destined to take the place of catgut in the armamentarium of the surgeon, and in the operating room of hospitals, both in military and civil service.—*The Military Surgeon*.

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## Editorial.

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### FORENSIC MEDICINE AND INSANITY.

MANY of the leading secular papers of the country for some weeks past have been surcharged with reports more or less in detail of a criminal trial in the city of New York, the result of the sudden death of a prominent citizen of that great metropolis from pistol shots fired by a young man possessed of considerable wealth. It seems that the efforts of the able attorneys for the defense have been to prove that at the time the deed was committed the defendant was insane. On the other hand, the prosecuting attorney has endeavored to show that said defendant at the time was sane, or if then insane, is still in that condition, and if by want of responsibility he shall escape the electric chair, he should be committed to an insane asylum.

While it is questionable as to the propriety of publishing in the columns of the daily press so much of the details leading up to the tragedy, yet the distinguished alienists who in the character of "experts" have been placed on the witness stand and their evidence is of no little interest to the medical profession. Some of these expert witnesses have stated positively in their opinion that the defendant was insane; others of equal national as well as local professional standing have stated as positively the contrary. On the one hand a new-coined word, "brainstorm," expressing a condition, has been evolved, while on the other it has been "tabooed."

Insanity, as a condition, has always been more or less a bone of contention between members of the medical and legal professions, and it

has been contended that there is a material difference between medical and legal insanity, and the contention as to whether a person was or was not insane has occasioned much discussion and argument in our civil and criminal proceedings. Dr. G. Fielding Blandford of London says, "Lawyers are prone to suggest that the medical profession is anxious to excuse crime under the cloak of insanity, while the latter look upon the so-called legal tests of insanity, especially the right-and-wrong test, as antiquated, misleading, and contrary to fact." — *Twentieth Century Practice of Medicine*, Vol. XII, page. 248.

In the *Alienist and Neurologist* of February, 1907, its very able and distinguished editor, Dr. Chas. H. Hughes, of St. Louis, says: "Little-enlightened, self-styled experts in alienism now-a-days often mistake the culmination in crime of lives of unrestraint for the disease form of psychokinesia.\* The latter being insanity, the former being the wanton wilfulness of pure cussedness, not deserving of the mercy demanded by morbidly engendered psychokinesia. Great criminals, committing the most heinous and revolting crimes, sometimes escape merited legal punishment through pseudo-insanity experts, unable to rightly diagnosticate insanity from gross criminality, because of ill-acquaintance with the clear data of true psychiatry, being unable to discern or exclude the disease element whose presence or absence alone should convict or set free for a home in an insane asylum."

In the early ages insanity was explained by the theory that some other personality had temporarily entered into the man, driving out and overpowering the true occupant; that he was possessed of a devil, or a spirit good or bad, other than his own. The aboriginal red man of this continent had a definite idea as to an insane person, and his conduct was actuated thereby; and although there is a very material difference between a sane and an insane person, we may be utterly unable to fix the exact line where the one ends and the other begins. Maudesley says, "You might as well attempt to draw the line between light and darkness;" and Dr. Clouston, at one time superintendent of the Royal Edinburgh Asylum for the Insane has said, "I have seen two men in exactly the same condition for the time being, so far as mental symptoms were concerned, and I would call the one sane and the other insane." He farther says, "There is no Rubicon over which a man passes from the one into the other. Insanity does not enter into a man at one door, while sanity departs at the other."

In any consideration of the subject it is of prime importance to determine what insanity is, one would naturally think, yet Dr. Geo. H. Savage, after more than a dozen years practical experience in charge of the Royal Bethlem Hospital, claims "that no standard of sanity as fixed by nature can under any circumstances be considered definitely to exist. 'Sanity' and 'insanity,' as recognized by the doctor, and in fact by the general public, must be but terms of convenience. No person is perfectly

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\* Impulsive Insanity.—ED. S. P.

sane in all his mental faculties, any more than he is perfectly healthy in body." Maudesley rather inclines to the view that the mind as a function is disordered, while Bucknill insists upon actual disease of the brain.

The law of self-control is one of the most difficult points to be established as a symptom of mental disease. Many conditions may give rise to acts which are uncontrolled, and which no ordinary amount of pressure or change of surroundings would enable the person to control; and hence arises the very difficult and complicated question: Under what conditions is this loss of self-control a symptom of mental disease, and under what conditions is it to be looked upon as the result of circumstances or conditions, if you please, which might and ought to have been controlled or checked by the individual?

The more recent German authorities do not attempt to give a definition of insanity. Dr. H. S. Stedman of Boston, in Buck's "Hand-book of the Medical Sciences," Vol. V, page 25, says, "An actual definition of the term 'insanity' is seldom found in recent works on psychiatry." Dr. Tuke, in his "Dictionary of Psychological Medicine," explains that "it is impossible to compass the multitudinous phases of mental disease under one rigid formula." Henry J. Berkley, M. D., of Johns Hopkins University, can be quoted as follows: "A definition of insanity, indeed, does not admit of verbal accuracy, for what constitutes sanity in one individual may be insanity in another who has had different surroundings, education, and moral training." Allen McLane Hamilton, M. D., more than twenty years ago said that, "No definition of insanity exists that will stand legal analysis, and it is exceedingly unwise in courts of law to attempt to give one."

Webster's definition of insanity is, "Unsoundness or derangement of mind; madness; a lunatic." Blackstone says, "A lunatic, *non compos mentis*, is one who has had understanding, but by disease, grief, or other accident has lost the use of his reason." He further states that "Insanity is that mental condition characterized by a prolonged change in the usual manner of thinking, acting, and feeling; the result of disease or mental degeneration." Esquirol states that "Insanity is a cerebral affection ordinarily chronic, without fever, characterized by disorder of the sensibility, of the intelligence, of the will." Connolly says, "Insanity is impairment of any one or more of the faculties of the mind accompanied with, or inducing a defect in the comparing faculty." Dr. E. C. Spitzka, in his "Manual of Insanity," apologizing for its length, gives this definition:—

"Insanity is either the inability of the individual to correctly register and reproduce impressions (and conceptions based on these) in sufficient number and intensity to serve as guides to action in harmony with the individual's age, circumstances, and surroundings, and to limit himself to the registration as subjective realities of impressions transmitted by the peripheral organs of sensation; or the failure to properly co-ordinate such impressions, and to thereon frame logical conclusions and actions: these



inabilities and failures being in every instance considered as excluding the ordinary influence of sleep, trance, somnambulism, the common manifestations of the general neuroses, such as epilepsy, hysteria, and chorea; of febrile delirium, coma, acute intoxications, intense mental preoccupation, and the ordinary effects of nervous shock and injury."

In a recent number of our valued contemporary, the *New York Medical Record*, Dr. Geo. W. Shields says that "A man or woman is insane who does not know the difference between right and wrong in regard to any specific, particular act, and who further does not know the consequences of committing such act." He insists, first, that a sane individual can distinguish between right and wrong; second, he is possessed of will power adequate to control his impulses, and to control them in the light of that knowledge of right and wrong, and that the law presumes a man to be sane according to this standard.

In the Nashville *Daily American* of March 8, ult., its weighty, erudite, and martial editor has the following:—

"Is any man sane when he commits murder? Did a sane man ever kill himself? Ask the alienists, the professional witnesses who are employed to muddle and mystify the jury. To those who understand insanity there is nothing mysterious about it. The so-called alienists use large words merely to conceal their lack of knowledge. When they enter the wide field of speculation they at once involve themselves in a fog of big words and large terms that may mean anything or nothing. Insanity, its cause, effects, and various forms may be easily explained by the man who knows so that the man who does n't know may easily understand.

"Insanity is a brain disease, a disorder of the mental faculties, pathologically and scientifically speaking. It may result from any one or more of many causes—a blow on the head, fright, certain excesses, living in Memphis, or reading the Congressional Record. Many cases result from traumatism. In the classification of the disease each alienist uses his own private classification and his own judgment. Our own classification runs from psychoneuroses, including melancholia and mania in their various stages, through degenerative forms, also the neurasthenical and hypochondriacal to general paresis and senile dementia. Where the patient can afford it, he is apt to have brainstorms and emotional outbursts. Adolescent insanity does very well for a beginner. By constant effort he may finally become a paranoiac. The man afflicted with adolescent insanity is also classed as a modern time damfool. A paranoiac has got 'em pretty bad. He is a congenital gump whose encaphalic matter is full of lesions. A man thus affected usually manifests a desire to vote the Republican ticket. Hallucinatory delirium is another form of mental aberration. In such cases the victim imagines he is a poet and writes stuff for the newspapers. This form is as common in woman as in man. Acute dementia is a common form, most pronounced in those who believe that the tariff is a tax which the foreigner pays. It is somewhat akin to what we



alienists call confusional insanity, in which the afflicted hold to the belief that the free coinage of silver at 16 to 1 would be a panacea for all our ills.

"There are various forms or shades within the different classifications. For instance, there is explosive insanity when a man steps on a tack. There is emotional insanity when bills the victim never heard of come trooping in on the first of the month. Then there is a form of adolescent hebephrenia shown by those who imagine the millennium can be ushered in by legislation.

"We have sought to make these statements plain so that the layman may understand them."

### TENNESSEE STATE MEDICAL ASSOCIATION.

*Preliminary Program for Annual Meeting.*

*April 9, 10, and 11, 1907, at Nashville, Tenn.*

"The Toxemias of Pregnancy," by J. B. Murfree, M. D., of Murfreesboro.

"The First Few Hours of the Puerperal State," by J. W. McCall, M. D., of Huntingdon.

"The Management of Occipito-Posterior Presentations," by G. C. Trawick, M. D., of Nashville.

"Misconception in the Theory and Practice as to the Cr  d   Method of Placental Expression," by J. L. Andrews, M. D., of Memphis.

"The Etiology, Pathology, and Prophylaxis of Puerperal Eclampsia," by G. W. Moody, M. D., of Shelbyville.

"Recurring Hematuria, Non-Malarial," by T. J. Happel, M. D., of Trenton.

"Typhilitis, with Report of Cases," by D. A. Walker, M. D., of Trenton.

"Functional Disorders of the Kidneys and Their Treatment," by Raymond Wallace, M. D., of Chattanooga.

"Cerebro-Spinal Meningitis (Epidemic)," by Wm. McCabe, M. D., of Nashville.

"True Croup (Non-Diphtheritic)," by Walter Dotson, M. D., of Kempville.

"The Baby from the Doctor's Standpoint," by I. A. McSwain, M. D., of Paris.

"The Cause of Death in Most of the Grave Diseases of Infancy," by E. H. Pomeroy, M. D., of Monterey.

"Tuberculosis in the Negro," by E. H. Jones, M. D., of Murfreesboro.

"Neurasthenia," by E. E. Collins, M. D., of Williamsport.

"Researches in Rabies," by Wm. Litterer, M. D., of Nashville.

"The Practical Use of the Opsonic Treatment in Certain Specific Infections, Especially Those of the Skin," by J. M. King, M. D., of Nashville.

"Some of the Finer Points of X-ray Diagnosis, Illustrated by Radiographs," by W. S. Lawrence, M. D., of Memphis.

"Some Remarks upon the Value and Danger of Suggestions and Allied Methods," by T. J. Runyon, M. D., of Clarksville.

"Open-Air Treatment of Tuberculosis, with Report of Cases," by C. A. Robertson, M. D., of Nashville.

"Perineorrhaphy," by Richard Barr, M. D., of Nashville.

"An Ovarian Cyst of the Abdominal Cavity," by Wm. D. Sumpter, M. D., of Nashville.

"Appendicitis, with Report of Cases," by R. J. McFall, M. D., of Cumberland City.

"Factors Influencing Permanence of Cure in Operations for Cancer of the Breast," by W. D. Haggard, M. D., of Nashville.

"Mediastinal Growths, with Report of a Case," by Chas. P. McNabb, M. D., of Knoxville.

"Lesions of the Prostatic Urethra and Their Reflex Symptoms," by Jere L. Crook, M. D., of Jackson.

"Prostatic Surgery," by W. A. Bryan, M. D., of Nashville.

"General Anesthesia with Chloroform and Ether," by Herman Hawkins, M. D., of Jackson.

"Local Anesthesia," by Paul DeWitt, M. D., of Nashville.

"Hemorrhoids," by Jno. L. Jelks, M. D., of Memphis.

"The Non-Infectious Sclerotic Ovary," by J. A. Gaines, M. D., of Nashville.

"The Significance of Abdominal Pain," by Lucius Burch, M. D., of Nashville.

"The Treatment of Fractures of the Femur at the Hip Joint," by C. N. Cowden, M. D., of Nashville.

"Some Cases of Bile Surgery," by M. C. McGannon, M. D., of Nashville.

"Traumatic Injuries of the Eye," by C. M. Capps, M. D., of Knoxville.

"The Importance of the Diagnosis of Glaucoma by the General Physician," by J. T. Herron, M. D., of Jackson.

"The Diagnostic Significance of Blood Spitting," by Richmond McKinney, M. D., of Memphis.

"Adenoid Vegetations," by A. W. Ogle, M. D., of Knoxville.

"The Differential Diagnosis of Multiple Neuritis and Muscular Atrophy," by D. R. Neil, M. D., of Nashville.

"Foreign Bodies in the Larynx," by M. M. Cullom, M. D., of Nashville.

"Headaches," by Hazel Padgett, M. D., of Nashville.

Those intending to present papers at the coming meeting should send titles at once to the Secretary, in order to have them included in the permanent program. The program will be closed April 3 in order to give printers time to put same in shape for meeting.

Railroad rates, one and one-third fare; get certificate at starting point.

GEO. H. PRICE, *Secretary*.

146 Eighth Ave., North.

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LABORATORIES OF REED AND CARNRICK.—Dr. W. von Riedl of the University of Berlin, former assistant in the laboratories of Professors Koch and Virchow, and late first assistant to the department of medicine in the University of Heidelberg, has been appointed pathological chemist and chief of the pathological and bacteriological laboratories of Messrs. Reed & Carnrick. He brings to us the latest thought and researches of the German laboratories, and the most advanced methods will be given to the examination of urine, sputum, excreta, blood, and tissue.

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NEURASTHENIA.—To-day it is generally recognized that neurasthenia is a real morbid condition. It is not the result of modern civilization, as many writers would have us believe, but an actual disease that has probably existed as long as society. The name is not a generic term and when so used implies ignorance of the real condition it describes. Instead, it represents a specific malady with a definite etiology, pathology, and symptomatology. There can be no question but that the trend of modern life, particularly under certain conditions, tends to aggravate and multiply cases of this disease. Overwork is unquestionably one of the principal causes, coupled with anxiety, worry, or persistent excitement. It is a fact that the nervous system or the mental economy of any person can stand only about so much. When overtaxed the results are bound to be disastrous, just as a muscle will suffer from excessive work. Add to overwork, individual habits, including excesses of all characters, and neuropathic tendencies which are all too often the result of hereditary influences, and it can be readily seen that nerve tire is of prime importance in the development of neurasthenia.

Within later years certain toxic states, such as syphilis, rheumatism, malaria, or the auto-intoxication of chronic constipation, have been recognized as important factors in the etiology of disease. At any rate close study points to this important fact, that not one, but several causes unite to produce the group of symptoms ascribed to neurasthenia.

The prime object in treating this distressing condition is to restore nerve balance. Change of scene, regulation of the diet, and correction of habits and faulty hygienic conditions are desirable features. But something more is always needed, and without the administration of some efficient tonic the neurasthenic will make little or no substantial improvement. The principal desideratum is to choose a tonic that goes further than mere temporary stimulation, one that will assuredly impart vigor to the nervous system, and at the same time assist each weakened organ in the re-establishment of its functions. Such a tonic is Gray's Glycerine Tonic Com-

pound. Clinical experience has proved the therapeutic value of this well-known product, and under its administration the various conditions incident to neurasthenia are corrected and overcome. The nerve balance is restored, the digestive organs take up their work, normal elimination is promoted, and the various symptoms characteristic of nerve exhaustion are dissipated without the slightest evidence of undue stimulation.

Gray's Glycerine Tonic Compound, moreover, has this very important advantage, it not only aids worn out, tired cells and organs to do their work, but it does more—it helps them to help themselves. The results obtained, therefore, are permanent, not transitory.

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**PERTINENT THOUGHTS.**—The epidemics of la grippe which have made their annual onslaughts for some years have taught us that this disease, once considered of no serious consequence, is so dangerous and difficult to treat that any suggestion regarding medication is always gratefully received.

With each succeeding visitation of this trouble, we have found it more and more necessary to watch out for the disease in disguise, and to treat these abnormal manifestations; consequently we have relied upon mild nerve sedatives, anodynes, and heart sustainers, rather than upon any specific line of treatment. Most cases will improve by being made to rest in bed and encouraging action of skin and kidneys, with possibly minute doses of blue pill or calomel. We have found much benefit from the use of Antikamnia and Codein Tablets in the stage of pyrexia and muscular painfulness. This tablet, containing 4 3-4 grains antikamnia and 1-4 grain of sulphate of codein, is a sedative to the respiratory centers. In the treatment of la grippe and its sequelæ, its value is highly esteemed. In diseases of the respiratory organs following an attack of la grippe, pain and cough are the symptoms which especially call for something to relieve. This combination meets these symptoms, and in addition controls the violent movements accompanying the cough. To administer these tablets in the above conditions, place one tablet in the mouth, allowing it to dissolve slowly, swallowing the saliva. Exhibited in the grinding pains which precede and follow labor; in the uterine contractions which often lead to abortion; in the various neuralgias, and in all neuroses due to irregularities of menstruation, this combination affords immediate relief. In these last conditions, always instruct that tablets be crushed before taking.

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**THE PREPARATIONS OF "PEPSIN,"** made by Robinson-Pettet Co., are endorsed by many prominent physicians. We recommend a careful perusal of the advertisement of this well-known manufacturing house. (See advertising page 17.)

**THESE ARE COCA FACTS.**—First, remember that the classic Coca of the Andes—such as the Indians use for endurance against famine and fatigue—is rich in valuable principles which are extremely volatile. This Coca is not to be found here in the open market. Don't waste valuable time experimenting with inert leaves. Mariani solved this problem nearly fifty years ago when he first presented the medicinal qualities of true Coca in nutritious wine, since known the world over as Vin Mariani.

Second.—Vin Mariani forms as nearly an ideal restorative tonic as it is possible to construct; because Coca supplies the elements of nerve tone, muscular capacity, and withal a depurative which so frees the blood of waste that every tissue is rendered more capable.

Third.—The wine with which this Coca is embodied forms an agreeable medium for preserving these qualities unchanged and presenting them for immediate assimilation.

These facts strengthen the testimony of worth which has maintained Vin Mariani before the medical world during the last half century.—*The Coca Leaf*, May, 1905.

A RECENT AND VERY PLAUSIBLE THEORY ascribes rheumatism "to toxins formed in the alimentary canal as the result of disordered digestive functions, producing disturbances in metabolism and alteration in the tissues. The body suffering these effects of auto-intoxication has its vital resistance lowered, and is therefore subject to microbic invasion."

Tongaline, from the character of its composition, has an anti-toxic effect on these microbes, and by its stimulating action on the liver, the bowels, the kidneys, and the pores, it eliminates promptly and thoroughly the poisonous germs which are the cause of rheumatism, neuralgia, grippe, gout, nervous headache, sciatica, lumbago, tonsillitis, and heavy colds.

**NEW ORLEANS POLYCLINIC**—*Post-Graduate Department of Tulane Medical College.*—The twentieth annual session opened November 5, 1906, and closes May 18, 1907. This school is intended for practitioners only. All instruction aims to be *clinical* and *practical*, and to this end, use will be made of the vast facilities offered at the great Charity Hospital, at the Eye, Ear, Nose, and Throat Hospital, and at the Special Clinics to be held at the Polyclinic.

Physicians in the interior, who, by reason of their isolation, have been deprived of all hospital facilities, will find the Polyclinic an excellent means for posting themselves upon the status of the science of medicine and surgery of the day.

Those desirous of perfecting themselves in any special department or of becoming familiar with the use of any of the allied branches, such as Electricity or Microscopy, will be afforded every facility.

For information address NEW ORLEANS POLYCLINIC, P. O. Box 797, New Orleans, La.

THE CINCINNATI SANITARIUM.—We have just received the thirty-third annual report of this splendid institution for the treatment of nervous and mental diseases, and which has so satisfactory and successful a history during its thirty-three years of existence. The daily average of patients for the year is the highest yet attained. The high percentage of recoveries and the low mortality rate, heretofore so marked characteristics, are fully maintained. Dr. F. W. Langdon is the medical director, and is assisted by Dr. B. A. Williams, who has been for so many years connected with the institution as senior resident physician, Dr. C. B. Rogers as junior resident physician, and a full and competent corps of well and thoroughly trained attendants. The clinical laboratory is in charge of Dr. W. E. Schenck, Hematologist, and Dr. C. B. Conwell, Pathologist.

Situated about one thousand feet above sea-level, in a naturally beautiful location of unsurpassed salubrity; its grounds comprising some twenty odd acres of diversified park, a picturesque lake, surrounded by magnificent forest trees, arboreal vistas, and sylvan retreats; gardens and conservatories supplying an abundance of fresh vegetables and flowers; and a never-failing spring of pure water used entirely for cooking and drinking purposes, the sanitarium combines the retired and restful features of the country with the accessibility and conveniences of a city mansion.

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QUITE A RECORD.—On the morning of March 4 Messrs. Kress & Owen Co., were visited by fire, which practically destroyed the manufacturing end of their business. They had, however, a duplicate plant in storage, and are pleased to state that after four days and nights of continuous work were again turning out their excellent preparation, Glyco-Thymoline.

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SODAVILLE, ORE., Nov. 5, 1906.

*The Anasarcin Chemical Co., Winchester, Tenn.*

I received a sample of Anasarcin Tablets some time ago, for which accept thanks. I have been a sufferer from heart trouble, difficult breathing, especially when ascending a height, also dropsy of the feet and ankles for a number of years.

Your suggestion of its therapeutical action indicated that it might be applicable in my case. I commenced their use at once, taking one tablet after each meal. I took no other medicine. It wrought wonders in my case; I am almost well. I have taken a great deal of medicine from time to time but with little benefit until I took this. With my experience with these tablets I feel that they are entitled to all the credit that you claim for them. Your discovery of such a splendid remedy means much in the advancement toward a higher standard of medical remedies.

It affords me great pleasure to recommend your Anasarcin Tablets to patients and to the medical profession.

Respectfully,  
D. M. JONES, M. D.

PANOPEPTON may be much relied upon in averting the sequelæ that are apprehended after pneumonia, la grippe, bronchitis, scarlet fever, and Typhoid. Panopepton, by ensuring undisturbed digestion and perfect nutrition to the patient, gives good support to the medicinal treatment, and keeps the way clear for a complete restoration of the normal functions.

It presents, in a proper nutritive balance—of protein and carbohydrate—the entire soluble and digestible substance of beef and wheat, peptonized and ready for assimilation. It is also remarkably palatable, and in every respect the superior food for the sick. It is here especially commended as a means of preventing, through its perfect assimilability and highly nourishing qualities, the complications that are liable to attend certain acute diseases.

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CONSOLIDATION.—Drs. S. T. and Clarence Martin of St. Louis, have recently acquired the *Medical Mirror* and consolidated it with their own journal, the *Medical Era*. The *Medical Mirror* has been prosperous and successful, and was one of the best known medical journals in the country. By consolidating it with the *Medical Era* they have largely increased the usefulness of the *Era* to its subscribers and added materially to its strength. The new journal will be known as the *Medical Era*.

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## **Reviews and Book Notices.**

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PROGRESSIVE MEDICINE, Vol. VIII., No. 4, December, 1906. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences.—Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 368 pages, 31 illustrations. Per annum, in four cloth-bound volumes, \$9.00; in paper binding, \$6.00; carriage paid to any address. Lea Brothers & Co., Publishers, Philadelphia and New York.

The December number of this valuable serial opens with a most excellent contribution on Diseases of the Digestive Tract and Allied Organs, the Liver, Pancreas, and Peritoneum, by Prof. J. Dutton Steele, M. D., of the University of Pennsylvania, of about 106 pages. Genito-Urinary Diseases, 16 pages, by Prof. Wm. T. Belfield, of Rush Medical College; Diseases of the Kidneys, 22 pages, by John Rose Bradford, M. D., of London; Anesthetics, Fractures, Dislocations, Amputations, Surgery of the Extremities, and Orthopedics, 104 pages, by Prof. Jos. C. Blood-

good, of Johns Hopkins; and Practical Therapeutic Referendum, 66 pages, by Prof. H. R. M. Landis, of Jefferson Medical College, together with a full and carefully prepared Index comprise the rich treat in store for those who will avail themselves of this number of "Progressive Medicine," the moderate price of which in paper cover is only \$1.50, in cloth, \$2.25.

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PLASTER OF PARIS AND HOW TO USE IT.—By MARTIN W. WARE, M. D., Adjunct Attending Surgeon, Mount Sinai Hospital; Surgeon to the Good Samaritan Dispensary; Instructor in Surgery, N. Y. Post-Graduate Medical School. 12mo, 72 illustrations, about 100 pages. Cloth, \$1.00. Surgery Publishing Co., 92 William St., New York City.

This is a vivid narrative, profusely illustrated, of the many uses to which Plaster of Paris is adaptable in Surgery. The whole subject, from the making of the Bandage to its use as a support in every form of splint, corset or dressing, is graphically described and illustrated. The use of Plaster of Paris in Dental Surgery is also covered. The book is presented in the artistic manner characteristic of the productions of the Surgery Publishing Company. It is printed upon coated book paper and attractively bound in heavy red buckram, stamped in white leaf and gold.

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ORGANIC AND FUNCTIONAL NERVOUS DISEASES.—By M. ALLEN STARR, M. D., Ph. D., LL. D., Professor of Neurology in the College of Physicians and Surgeons, New York; ex-President of the American Neurological Association, and of the New York Neurological Society. Second edition, thoroughly revised. Octavo, 824 pages, with 282 engravings and 26 full-page plates. Cloth, \$6.00, net; leather, \$7.00, net. Lea Brothers & Co., Philadelphia and New York, 1907.

The author's position in the forefront of neurologists has been shown anew in the rapid exhaustion of the first edition of his work, limited though it was to organic nervous diseases. An even warmer reception is assured for this revision, which brings the organic portion to date and adds a section covering the functional diseases, so that the volume now presents the whole field of neurology as understood and practised by a master. The author is the reverse of abstruse or nihilistic. On the contrary,



he is straight forward and direct, and justifies his optimism as to the advanced position of neurological diagnosis and treatment by the wealth of information placed at command of his readers. Paying due regard to theory, he devotes especially full attention to etiology, diagnosis and treatment, both medical and surgical. The book is largely based on the solid foundation of long experience, but it also embodies the well-attested knowledge of other authorities as gleaned from a thorough sifting of the vast literature of neurology. Practical, authoritative, covering the whole subject in all its aspects, and abundantly illustrated, this new edition of Prof. Starr's work answers the need of students, practitioners and specialists.

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MANUAL OF CLINICAL CHEMISTRY.—By A. E. AUSTIN, A. B., M. D., Professor of Medical Chemistry and Toxicology in Medical Department of Tufts Medical College of Boston, Mass. 8vo, cloth, 278 pages. Price, \$1.75. D. C. Heath & Co., Publishers, Boston, 1907.

This is decidedly a new kind of chemistry, designed, as the author states, "to make chemistry the hand-maid of clinical medicine." It gives the modern methods of analysis for clinical purposes, with the inferences to be drawn from the presence of all abnormal constituents of the secretions, both bacteriological and chemical. To the student and practitioner it affords the interpretation of laboratory findings of such a character that he may learn quickly, not only that a result presages a condition, but why it does so. Its aim is to enable one to use chemistry in diagnosis, that is, clinically.

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A STUDY OF HUMAN BLOOD-VESSELS IN HEALTH AND DISEASE. A Supplement to "The Origin of Disease."—By ARTHUR V. MEIGS, M. D., Physician to the Pennsylvania Hospital. Cloth, 8vo, 136 pages, with 103 illustrations. Price, \$5.00. J. B. Lippincott Co., Publishers, Philadelphia and London, 1907.

It has been very correctly said that "a man is as old as his arteries," and the very important role of the channels for carrying the vital fluid to and from the various tissues and viscera of the body is very thoroughly and practically considered by Dr. Meigs in his truly original manner, not only the subject matter

but the illustrations being *original*. The illustrations were made from observations by the author in his work as physician to the Pennsylvania Hospital. This excellent work is a careful study and consideration of the human blood-vessels, including both pathology and anatomy; and it forms a very satisfactory supplement to the author's valuable contribution on "The Origin of Disease."

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ESSENTIALS OF OBSTETRICS.—By CHARLES JEWETT, M. D., Professor of Obstetrics and Gynecology in the Long Island College Hospital, Brooklyn, N. Y. Third edition, thoroughly revised. 12mo, 413 pages, with 80 engravings, and 5 colored plates. Cloth, \$2.25, net. Lea Brothers & Co., Philadelphia and New York, 1907.

Professor Jewett's object is to place the essential facts and principles of obstetrics within easy grasp of the student. This compact volume is intended as an introduction to the more elaborate treatises, and as a guide in following the didactic and practical teaching of college courses. Most attention has been given to practical topics. Works of this character have their distinct place and value, since mastery of the elements of any subject gives the rational framework for an easy and orderly acquisition of complete and systematic knowledge. Such a work is, therefore, useful not only to the student but also to the practitioner who would refresh his recollection or post himself to date. It has been completely revised, largely rewritten, and rounded out with much entirely new matter.

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### *Selections.*

THE TREATMENT OF FETID FEET.—Sabourand (*Journal de Pharmacie et de Chimie*) recommends a four per cent. solution of chromic acid in distilled water in cases of profuse perspiration of the feet with foul odor. The solution is applied quickly with a pledget of cotton, care being taken that it penetrates between the toes. The application should be made each day for several days, then every second day following, and later once a week until the cure is completed. The lotion should not be applied twice on the same day lest it cause some erythema.—*Medicine*.

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**EDITOR AND PROPRIETOR**

**VOL. XXIX.**

**NASHVILLE, MAY, 1907.**

**No. 5**

***Original Communications.***

**THE ETIOLOGY, PATHOLOGY, AND PROPHYLAXIS  
OF PUERPERAL ECLAMPSIA.\***

**BY G. W. MOODY, M. D., OF SHELBYVILLE, TENN.**

AN extraordinary degree of interest gathers about everything pertaining to the welfare of the pregnant and parturient woman, for she not only has a heavy burden to bear physically and mentally, but in its issues two lives are involved. From the moment that conception takes place she begins to bear a burden which places an additional tax on her physical functions, which demands extra care on the part of herself and friends in the observance of hygienic rules that she may pass safely through all its dangers.

It has been said that a pregnant woman has two to feed, but perhaps the more important thing is that she has to perform ex-

\*Read at the meeting of the Tennessee State Medical Association, April 10, 1907.

cretory functions for two in disposing of the waste products of fetal metabolism which are introduced into the system from the placental circulation, and this too, when the functions of her own organs in the latter months of pregnancy are mechanically oppressed by an enlarged uterus.

We are not surprised then to find in the majority of pregnant women more or less toxemia, sometimes in the early, oftener in the latter months of gestation. In fact, we are warranted in the statement that very few escape some degree of toxemia, even where it is not manifested by any positive symptoms.

This leads me to the consideration of one of the most important, because most serious, of these blood alterations which exists in connection with, and as a forerunner of puerperal eclampsia. A great deal of interest has been manifested in this affection in recent years, and quite an addition has been made to our knowledge of the subject, but while it is known to be a state of profound toxemia, yet the origin of the poison is still unknown.

When Frerichs emphasized the occurrence of convulsions in connection with albuminuria it was for a long time considered that uremia was the sole cause of convulsions.

A new interest has been awakened since Schmorl announced as a result of his investigations about ten years since that the primary cause is found in the absorption of pathological cells from the placenta into the circulation of the mother. He has demonstrated the exfoliation and absorption of these cells from the intervillous spaces.

I have been impressed that in the disposition to accept the "newer pathology" as announced by Schmorl there is danger of drifting too far away from the important part which the kidneys bear in this pathological condition. With the object of getting the latest views on this subject, I recently addressed the following inquiry to a few obstetricians. For obvious reasons, I did not address any member of this Association:—

"What is your individual clinical experience as to the pathology of puerperal eclampsia, leaving out of consideration the investigations of others, or any teaching of medical literature

or theories on the subject; your personal clinical experience, uninfluenced by any impression received from other sources?"

I received the following replies:—

Dr. J. Whitridge Williams of Baltimore says: "My views concerning the pathology of eclampsia are firmly fixed, and are identical with those of Schmorl. The most characteristic lesion is to be found in hemorrhagic necroses of the liver, which first occur in the peri-portal spaces, and apparently originate from a thrombotic process. These changes occur in every case and are thoroughly characteristic. These changes in the kidneys do not occur so regularly, but consist in degenerative lesions and very rarely in an acute inflammatory process. I consider that both the liver and kidney changes are secondary to toxemia, concerning whose origin we are yet profoundly ignorant."

Dr. Henry O. Marcy of Boston says: "I have long felt that puerperal eclampsia had its primal cause due to interference with renal excretion (certainly pressure one of importance) very like certain toxins are eliminated, and as a consequent the nervous system is affected."

Dr. J. Wesley Bovee of Washington, D. C., says: "In my clinical experience the causes of eclampsia are rarely epilepsy and hysteria, but nearly always overcharging of the tissues with effete material, that is, an accumulation of the usual body excretions."

Dr. Walter B. Dorsett of St. Louis says: "The cause of puerperal eclampsia is due to the non-elimination of toxins through the natural emunctories of the body."

Dr. C. L. Bonfield of Cincinnati says: "My own observation leads me to believe that in the majority of cases there is a lack of elimination by the kidneys and liver. Lack of exercise and overfeeding seem to be contributory factors."

Dr. E. P. Davis of Jefferson Medical College says: "The newer pathology regarding eclampsia considers the condition the result of a general toxemia, manifesting itself in the alteration of the blood and exhibiting its lesions most pronouncedly in the liver, lungs, kidneys, spleen, and other viscera. The prominent symptom in this toxemia is deranged metabolism and abnormal

disposition of nitrogenous matter. The exact links in this chain are not clear. We may reasonably conclude that toxemia and eclampsia are not to any great extent of fetal origin. Syncytio-lisin, a placental ferment, undoubtedly influences the blood of the mother, and probably has something to do with the causation of eclampsia."

An editorial in the *Journal of the American Medical Association* of June 9, 1906, suggests that "the additional amounts of metabolic products thrown into the maternal blood, both from her own over-active organs and from the fetal tissues, cause injury to the liver and kidneys, as a result of which there is a deficiency of renal elimination, coupled with a loss of the normal detoxicating function of the liver and abnormal nitrogenous metabolism resulting from the injury to the same organ. The accumulation of toxic products from these two sources leads to further renal and hepatic injury, and thus a vicious circle is established."

Once more: Dr. Barton Cook Hirst of the University of Pennsylvania says: "My personal experience with eclampsia, amounting now to more than one hundred and fifty cases, leads me to the following conclusions in regard to pathology: The cause of the disease is some toxin or toxins, derived from the fetal body and absorbed into the maternal blood and conveyed to the liver to be prepared for excretion by the kidneys. Of the two organs, the kidneys are the more important; that is to say, the liver may do its work well, but if the kidneys fail as excretory organs, eclampsia is probable. On the other hand, the liver may not be acting perfectly, as shown by slight jaundice, but if the kidneys are perfectly normal, eclampsia is improbable. In more than four fifths of the cases the eclampsia is preceded by a steadily increased albuminuria. As far as the gross anatomy of the disease goes after death, my experience coincides with that of most observers. There are signs of degeneration of the liver in the vast majority of cases, epithelial degeneration of the kidneys, and intense congestion of all internal organs, most marked in brain and lungs."

This clear, concise expression from Dr. Hirst appears to me

in the light of our present knowledge to be the most correct statement of the pathological condition in puerperal eclampsia of anything that I have seen. If we add to this a few words from the expression given by Dr. Whitridge Williams in reference to the primary cause, I think we have about covered the case. He says: "concerning whose origin we are as yet profoundly ignorant."

It is very rare that any disease is caused by one thing. So the toxemia of eclampsia is brought about and fostered by a variety of causes. There is no doubt, I think, but that an inherited constitution contributes in some instances. I have noticed that these women are generally those of lymphatic temperament or constitution with a laxity of tissues, which do not possess that resistive force to encroachment on the physiological functions that we find in a stronger constitution. They sometimes have tubercular ancestry of one or two generations antecedent. With few exceptions they are of low stature and heavy build. Such persons do not generally possess as much resistive force as those of an average physical form. Possibly in them the parenchymatous organs are more subject to intra-abdominal pressure from an enlarged uterus in the unyielding structure of the primipara, or in the case of twins, in whom we most frequently find this condition.

Lange has suggested that deficient thyroid action contributes to toxemia by the absence of its detoxicating influence on the blood. This has not received much support, though it does probably have something to do with it.

Whatever may be the primary and co-operating causes of the toxemia which terminates in eclampsia, the final pathological condition which accompanies and precedes convulsions is in a large majority of cases renal insufficiency. So much so, that it may be said to be the exception for it to be otherwise. In the language of Hirst just quoted, "The liver may do its work well, but if the kidneys fail as excretory organs, eclampsia is probable. On the other hand, the liver may not be acting perfectly well, but if the kidneys are perfectly normal, eclampsia is improbable."

I do not know any pathological condition which is more easily recognized than the uremia of pregnancy which accompanies and precedes convulsions. The headache, gastric disorder, edema, disordered vision, nervousness and wakefulness, with arterial tension and albuminuria, are unmistakable symptoms.

All of these symptoms rarely occur in any one case, but a sufficient number of them are present to make it rarely doubtful. Albuminuria is one of the most constant of these symptoms. In my observation from an experience of many years in which I have given a great deal of attention to this subject, I have not seen in my own practice or the practice of other physicians, where the case has been thoroughly investigated, a single instance of eclampsia or what I considered to be threatened eclampsia, in which the condition of uremia did not exist. I have not even seen a case where there was not albuminuria. I make this statement in the light of the commonly expressed opinion that the kidneys are not always involved. I do not mean by this statement to say that the kidneys are always involved, but I just give expression to my experience. I believe it is an exception to the rule when the kidneys are not involved, and I always feel safe as far as eclampsia is concerned when there is no uremia. A foot-note in *Hirst's Obstetrics* says, "We have had 46 cases of eclampsia in the University Maternity. All of the 46 cases had albuminuria before the convulsions appeared."

Edgar says, "In 84 per cent. the urine contains albumen,—there is an increase of albuminuria with each attack,—the danger becomes more pronounced in proportion to the increase of the albumin and the decrease of the water excreted in the twenty-four hours. As these conditions are reversed, to a corresponding extent, the danger becomes more remote." The fact that albumin is not found in the urine in any given case, does not prove there is not renal deficiency. It is known that in non-pregnant chronic nephritis convulsions have occurred when no albumin had been found in the urine. It is rather significant that arterial tension, and other symptoms in pronounced toxemia of pregnancy, are also prominent symptoms in the uremia of chronic nephritis.

Dr. Christopher Parnall of Jackson, Mich., in a paper read



before the Michigan State Medical Association reports a fatal case of eclampsia occurring after delivery of twins, in which the urine on examination after labor set in, showed neither albumin, casts, nor blood, but there were systemic symptoms of uremia. The urine on examination a few hours later after convulsions occurred showed albumin decidedly with a few blood cells.

Edgar says that "Ewing appears to discredit all reports in which there is destruction of the liver and the urine is reported as normal. He thinks these reports represent an incomplete investigation or defective methods."

I have dwelt upon renal inadequacy as the most important factor in the production of eclampsia because this phase of the subject is the practical side and affords an index to the pathological condition which may be recognized by the watchful, intelligent physician, and the dreadful catastrophe averted.

The first step in the prevention of puerperal eclampsia consists in the practice of those hygienic measures which keep the physiological functions in the best possible condition, and the woman should be thoroughly instructed in these things at the beginning of pregnancy. This relates chiefly to diet, bathing, exercise, sleeping, the bowels and kidneys, with agreeable social conditions. There is generally a tendency to constipation in pregnancy and this should be prevented. The woman should be instructed to keep the physician informed as to her condition, and especially to report if there is headache, nausea, edema, disordered vision, wakefulness, or nervousness. Examinations of the urine should be made during the latter months of pregnancy whether any symptoms of uremia appear or not. If albuminuria occurs or any symptom of uremia, it should receive prompt attention. If the symptoms are slight, the patient should be given calomel and a purgative saline, and the saline repeated from day to day. She should be placed on a restricted diet of milk, bread and butter, with fresh ripe fruit, and drink freely of water. If the symptoms do not soon yield to this treatment, or are more pronounced than when first noticed, she should be restricted to an absolute milk diet, and if necessary, rest in bed with hot packs until there is some relief. The more pronounced the symptoms in the same

proportion should the treatment be prompt and decided. In the majority of instances the unfavorable symptoms will yield to these measures. I do not mean to say it will be successful in all cases. If they do not prove successful, and this condition is threatening, labor should be induced.

If we come to a case of labor with threatened eclampsia, either where a corrective and eliminative treatment has failed to relieve the toxemia, or one in which we have no warning, these measures should be continued or instituted. Chloral or hypodermic morphia should be administered, with normal saline solution per rectum or hypodermically, and delivery accomplished as speedily as possible.

The following cases are interesting, not so much on the line of successful preventive treatment, as showing in other respects the importance of looking after these cases:—

*Case No. 1.*—Called to see Mrs. F. Oct. 20, 1886 at 9 P. M., age 14, primipara at full term, of marked low stature and heavy build, had been in labor several hours, cervix beginning to dilate, well marked symptoms of uremia—headache, gastric disorder, edema of extremities, face, and trunk. Very much agitated. On examination of urine, found specific gravity 1008, and heavily loaded with albumin. Expressing fear of convulsions to the patient's mother, who said that she herself had convulsions at the birth of her first child, I gave the patient twenty grains of chloral, which quieted her nervousness for a few hours. She had repeated doses of salts until bowels moved freely. A few hours after giving the chloral she had a hypodermic of morphia, which was repeated again in several hours. The uremic symptoms gradually disappeared in about a week, but there was albumen in the urine for about six months.

*Case No. 2.*—Mrs. T., aged 30, primipara, characteristic low stature and heavy build. She was under my care from the beginning of pregnancy. During the seventh month albumin appeared in the urine with some systemic symptoms of uremia. She was placed on restricted diet and eliminative treatment, which improved her condition but did not give the desired relief. The treatment was continued with restriction to milk diet, but I

could not keep her on absolute milk diet. She said it nauseated her and she would not submit to it. The treatment was continued with limited diet. She was better and worse at times, but on the whole the uremic condition was advancing. She had a variety of eliminative and corrective treatment and thyroid extract. About the middle of the ninth month, contemplating the induction of labor, I suggested to the husband a consultation, which we agreed to have on the next day. That night the husband telephoned me that his wife was considerably better and they thought we need not have the consultation, to which I hesitatingly agreed. The patient living some distance in the country, and receiving favorable reports at frequent intervals through her husband, I did not see her again until I was summoned to attend her in labor. Reaching her at about 4 A. M., I found the cervix about fully dilated and the labor progressing satisfactorily, except she was in a pronounced uremic condition. Realizing the gravity of the case, I at once gave her a hypodermic dose of morphia, and immediately proceeded to deliver with forceps. This was very soon accomplished and the third stage completed. The child was dead. Soon after delivery I gave her a dose of sulphate of magnesia, and before leaving her about two hours afterward I gave her another hypodermic of morphia. Though leaving her with some apprehension, I felt gratified that she had passed through the labor with no untoward result. About five hours after leaving her I was summoned to see her again. On reaching her she had headache and nausea and was blind. She said, "Doctor I can't see you, I can't see anything. What is the matter that I can't see?" The pulse was more frequent and tense, temperature  $102^{\circ}$ . A few hours later she began to be delirious, the temperature increased, and the blindness continued. She had venesection, veratrum, sulphate of magnesium, chloral, and normal saline solution by the rectum. At this time Dr. J. S. Nowlin of Shelbyville saw her with me. She began to improve in about fourteen hours, and gradually, but slowly, recovered without a convulsion. There was albumin in the urine for about six months. This was the most obstinate case of toxemia of pregnancy with which I have ever met.

*Case No. 3.*—This case is very interesting as an instance of the destructive consequences of neglect. A young husband approached me on the street and said his wife, Mrs. W., was expecting to be confined in a week or a few days, and he wanted me to attend her. On asking him about her condition he said she was doing well, but on special inquiry as to symptoms I was impressed that she was uremic and requested him to bring me a sample of urine. He said he would be in town one day next week and he would bring it then. It was with some difficulty that I impressed him with the importance of the situation and immediate attention to the matter. He brought the sample of urine promptly, and on examination I found it of very light specific gravity and it coagulated almost solid on boiling. I had not completed the examination more than five or ten minutes when I received a message to come in haste to see Mrs. W., that she was having convulsions.

I could report a number of cases in which the uremic condition has been relieved during the latter months of pregnancy by appropriate treatment, so that the woman has come to full term and passed through parturition without any serious apprehension of convulsions.

In concluding this paper, I desire to emphasize the following summary:—

First, the pathology of puerperal eclampsia consists in a toxin or toxins in the maternal circulation, of unknown origin, but probably derived from the products of fetal metabolism, or the placenta or both, and cause degeneration of the liver, with thromboses and necrotic areas in the liver, and epithelial degeneration of the kidneys, and congestion in other organs. The maternal blood thereby being deprived in part of the detoxicating function of the liver and the excretory function of the kidneys, and perhaps other organs, becomes profoundly toxemic, chiefly at the last through renal insufficiency.

Second, The prophylaxis of puerperal eclampsia consists of guarding against toxemia from the beginning of pregnancy, and the physician should be watchful for symptoms of toxemia and especially uremia, and give prompt attention to the relief of this

condition when it appears, by the use of corrective and eliminative treatment.

Third, In a case of grave uremia which does not yield to treatment, labor should be induced.

Fourth, If we come to a case of labor where there are marked symptoms of uremia, labor should be terminated as speedily as possible, and eliminative and anti-eclamptic treatment instituted before the appearance of convulsions.

I desire to acknowledge my indebtedness to the courteous replies to my letters of inquiry as reported in this paper, and also to the following literature:—

Clark—*Surgery, Gynecology, and Obstetrics*, July, 1906.

Davis—*The American Journal of the Medical Sciences*, February, 1905.

Edgar—"The Practice of Obstetrics," 1904.

Hirst—"A Text-Book of Obstetrics," 1903.

Editorial—*The Journal of the American Medical Association*, June 9, 1906.

Parnall—*American Journal of Obstetrics*, Vol. LIV, No. 4, 1906.

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## TREATMENT OF DIFFUSE PERITONITIS.\*

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BY LUCIUS BURCH, M. D., OF NASHVILLE, TENN.

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THE treatment of this condition is still a subject of active discussion by all surgeons, and the results of the various methods of treatment vary considerably. Until quite recently any case of diffuse peritonitis was considered as absolutely fatal, and if a case recovered it was looked upon as something marvelous. I am happy to say that at the present time the mortality of this so much dreaded disease varies anywhere from five to seventy per cent., and by carrying out a proper technic we are now able to save many cases that in former times would have been considered absolutely hopeless. We must not, however, become

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\* Read at meeting of Middle Tennessee Medical Association.

too sanguine, for many operators in their enthusiasm over a particular line of treatment have become unduly hopeful and have reported recoveries of diffuse peritonitis which were only local in character.

By a diffuse peritonitis is meant an inflammation of the whole peritoneal cavity with a redness of the membrane, an inflammatory exudate, and in the later stages a paresis of the intestinal tract. This inflammation shows no tendency to localization or abscess formation, and in the majority of cases is due to the colon bacillus, yet the streptococcus is occasionally the cause, and when so, the prognosis is correspondingly grave; we also see a few cases where a sudden outpouring of the gonococcus in large numbers will produce a general peritonitis.

In the treatment, therefore, let us remember that the colon bacillus is the most common enemy that we meet with, and for this reason it would be a great mistake to use the antitoxin serum in all cases unless the anti-bacillus coli communi serum is discovered, and this only to be used where the colon bacillus is the exciting cause. There are two methods of treating this condition — palliative and operative. The palliative is indicated in two conditions: 1, Where the services of a competent surgeon cannot be secured; and the second condition is one mentioned by Frederick in his discussion of this subject before the International Society of Surgery held in Brussels, September, 1905, in which he states that no patient should be operated on who has a bulbar paralysis manifesting itself by an imperceptible pulse, coldness, and cyanosis of the extremities, and a history of peritoneal involvement. It is settled beyond all question of a doubt that the best results are obtained by operative treatment, provided the patient is not moribund, and for this reason I intend to lay special emphasis on this line of treatment.

The earlier the diagnosis and operation the better the result, for the reason that absorption of poisonous products is prevented and nature has an opportunity to assert itself. In operating for this condition the *sine qua non* should be quickness and gentleness. The incision is made over the region where we suspect the cause of the peritonitis originated, and in the majority of cases

this focus of infection should be removed; in other words, if a ruptured appendix or pus tube is the cause remove it, and as time is of so much value, it is not essential to carry out the finished technic that we would in ordinary operations on these structures.

Up to this point nearly all operators are uniform in their views, but now comes a disputed point, Is it best to irrigate or not? Young, in an article in the *Journal of the American Medical Association*, expresses the opinion of twenty-five American surgeons of well known ability, fifteen being in favor of irrigation, and ten opposed. At the present time, however, I have no hesitancy in stating that the majority of surgeons do not irrigate, yet there are still others who do resort to it and obtain good results.

The next step in the operation, namely, the use of drains, is one about which there is still some discussion, although the majority of surgeons the world over favor their use. Yates, however, states that drainage of the general peritoneal cavity is a physical impossibility, and he gives the results in a number of experiments on dogs. He states that adhesions are formed around any drain in dogs in six hours time, and these adhesions prevent drainage of the general peritoneal cavity. He further states that the discharge from the drain is simply the result of mechanical irritation from a foreign body. That his statements are true when carried out on a healthy dog I do not doubt, but when in relation to a human being with general peritonitis, I know to be wrong. It was my good fortune to witness during the last winter two autopsies on cases that had been operated on for general peritonitis and in neither case was there any evidence of adhesions around the drains; yet I am sure that if these cases had progressed to a favorable instead of a fatal result, adhesions would have formed when body resistance overcame infection; but at that time the drains would have accomplished their function, and their presence would not be necessary. I would suggest that a rubber drainage tube be placed in the bottom of the pelvis, and a split tube containing gauze—a cigarette drain be placed over the focus of infection and brought out at the lower part of the abdominal incision. The first should be removed at

the end of the third day, and the cigarette drain at the end of the fifth or seventh day.

Where serious distension of the intestinal tract has occurred with threatened or actual paresis, enterostomy is indicated, and is best done by the method of Wolf. A distended loop is seized and a purse-string suture placed, an incision made in the center of the part surrounded by the purse-string, a large rubber tube inserted and pushed up toward the stomach, at the same time the purse-string is drawn tight to prevent leakage, the contents of the bowel are drawn off, the tube withdrawn, and the purse-string tied and then re-inforced by a Lembert's suture.

The patient on being put to bed is placed in the semi-sitting or Fowler's position, which in itself is a life-saving procedure. By means of this posture the fluids are carried to the pelvis, where absorption is least rapid of any portion of the peritoneum, and from the pelvis removed by the drains. Murphy, of Chicago, has had the most remarkable success in the operative treatment of diffuse peritonitis, losing only one case in a series of twenty-nine. As Le Conte, of Philadelphia, remarks in a very able article in the *Annals of Surgery* as to this method of treatment, "it contains nothing new, but he has assembled all the good things to do, and leaves out the unnecessary or harmful ones."

The Murphy technic is as follows:—

1. As rapidly as possible remove the cause of the peritonitis with as little handling of the viscera as can be avoided; do not sponge or irrigate.

2. Place a tube in the bottom of the pelvis and bring out above the pubis; another drain is brought out through the original incision, and the patient put to bed in Fowler's position.

3. A small tube is inserted about two inches into the rectum, to which is attached a fountain syringe and so arranged as to allow from one pint to one quart of salt solution to flow per hour; this rectal irrigation is to be kept up for three or four days.

4. The prevention of peristalsis by withholding food of any character and also aided by the use of opium if needed.

This treatment to my mind is the ideal one, and one that I



have used in several instances with perfect results. By refraining from sponging and handling the viscera no new avenues are opened for absorption of the poisonous products, and much valuable time is saved. By placing the drains as mentioned, and with the Fowler posture assisted by the pump-like action of the diaphragm, the poisonous fluids are removed. The object of the continuous rectal irrigation is to cause a reversal of the flow of the lymphatics, making the peritoneum a secreting instead of an absorbing surface; it also causes the kidneys to act much more freely, thus eliminating toxines, frequently as much as seventy ounces of urine being passed in twenty-four hours. The prevention of peristalsis and in this way preventing the dissemination of the poisons by withholding food and purgatives can be appreciated by all.

This makes an ideal treatment of peritonitis for all cases of suspected peritonitis before operation, and it should also be used in those cases in which an experienced surgeon cannot be secured. Atropine given hypodermatically in doses of 1-100th to 1-60th grain is a valuable remedy in those cases showing a tendency to intestinal paresis. Mikulicz has used solution of nucleinic acid hypodermatically in the treatment of general peritonitis, the object being to produce a hyperleucocytosis, and in this way increase resistance. His results in thirty-four cases were very satisfactory, and while it is true that the method of treatment is yet in the experimental stage, I believe the outlook is exceedingly favorable.

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### ANNUAL ADDRESS.\*

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BY W. R. SIFFORD, M. D., PRESIDENT OF THE DAVIDSON COUNTY  
MEDICAL SOCIETY AND NASHVILLE ACADEMY OF MEDICINE.

*Mr. President and Gentlemen of the Academy:—*

IN retiring from the Chair as your presiding officer for the past year, I desire to express to the faithful and sincere members of this Society my sincerest thanks for their efforts in making the

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\* Delivered at the Regular Meeting, Tuesday, April 16, 1907.

year just closed a successful one. It has, perhaps, been the ambition of each of my predecessors to make his term of office the banner year from every standpoint. How well they succeeded is now ancient history. If I, too, possessed such ambition at the beginning of my term of office, I am now in position to cast a retrospective glance over the results of the past year, and see whether or not such ambitions have been gratified.

In order to reach a satisfactory conclusion along this line, it might not be amiss to give you a brief resumé of the work done during the just closed year; and the condition of the Academy as it stood one year ago as compared to its present status. I find by reference to the books of our worthy Secretary and Treasurer that there were at the beginning of the year 123 members in good standing. During the year 16 members have been elected bringing the total membership, at the present time, to 139; not a large addition to the membership, and yet a healthy growth, and one, I believe, that will compare favorably with any of previous years, except perhaps the year in which the new law requiring physicians to affiliate with their county society before they were eligible to membership in the state society went into effect, at which time the profession of both city and county was thoroughly canvassed. Since that time we have had practically no material from which to secure new members, except the young men, who are just beginning their life's work; and members of the profession who have recently changed their location and have cast their lot with us.

*Work Done During the Past Year.*—Section 2, Chapter 3 of our By-Laws defines the duties, obligations, etc., of the President as follows:—

“The President shall preside at all meetings of the Academy, and perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession in the county, during the year; and it shall be his pride and ambition to leave it in better condition as regards both scientific attainments and harmony, than at the beginning of his term of office.”

It has been my endeavor to fulfil the first part of the above named duties and obligations during the entire year, and I believe

the minutes of the body, as recorded by our worthy Secretary, will bear me out in the statement that I have been present at more meetings during the past year than has any one of my worthy predecessors, during his term of office. I make this statement with no desire to criticize any one of my predecessors; but more for the purpose of stimulating my worthy successor to do his full duty at best along this line, if no further. It has also been my ambition to comply, so far as possible, with the requirements of the second part of the above named section of the By-Laws; but I regret to state that I cannot speak with the same degree of pride concerning the fulfilment of the last part of the section, as I have already done in regard to the first.

The scientific work done by this body during the past year has not been up to the high standard we should maintain. We have had some most excellent papers presented here during the year, but on the whole, we have had a paucity of papers, and it is this one fact more perhaps than any other that has kept the scientific work of this body below par during the year.

This unfortunate state of affairs should not be allowed to exist in this Academy longer. Medicine is advancing throughout the civilized world, and I see no reason why the profession of Nashville and Davidson County should not keep pace. There are necessarily reasons for this deplorable condition, into which we have gradually been drifting for some time; and with your permission, I propose to express an individual opinion as to the cause, with perhaps a few suggestions as to the remedies to be applied. This opinion is expressed after a thorough study of the situation during the past year, and I believe any member of this Society who attends practically all the meetings for one year is better prepared to express an opinion along this line than one who occasionally drops in during the year.

First of all we have had entirely too many meetings for which we had no essay provided. One reason for this, in my opinion, is the fact that on many occasions we have had some very creditable papers presented here, which elicited practically no discussion, thereby throwing a damper over the ardor of these members to come forward with future papers. Another reason I might

offer for a lack of interest on the part of the younger members is the fact that on occasions when the notification cards contain the name of a member of well known ability to prepare and read a really first-class scientific paper loaded to the muzzle, with that most unreliable of all ammunition, statistics, they come here and find the hall filled with members who listen with bated breath to the most excellent paper, prepared, oftentimes, at the cost of a great deal of time and labor, and which elicits a free and full discussion. But how many times do we have papers prepared by other members who are, perhaps, just as anxious to please, and who, perhaps, devote as much time and labor to the preparation of a paper, the reading of which scarcely commands the respectful attention of the members, and the discussion of which is almost *nil*.

I believe it to be the duty of each and every member of this Academy to attend as many of the meetings as is possible, regardless of the subject of the essay or the name of the essayist. By so doing the attendance could soon be brought up to a higher standard, and the younger members would be encouraged to do more and better work in the future.

In soliciting members of the profession for membership in this body during the past year, I have met with many objections. One objection was the fact that members had informed them that the Academy was run by a few individuals, and in the interests of these same gentlemen, and that any one outside of this clique could not get an opportunity to express an opinion on any subject. Still another impression that seems to prevail in the minds of not a few members of the profession, is that this Academy is used very largely as an advertising medium by some of its members.

This impression should not be permitted to remain in the minds of members of the profession who are still outside this society. By proper solicitation of such men by individual members, and a cordial invitation to attend the meetings and see for themselves the manner in which the affairs of the Academy are conducted, I am convinced that during the coming year our membership could be very materially increased.

During the past few years I have heard various complaints in regard to unjust rulings by the presiding officer of this body, the disgruntled ones claiming that certain members were allowed unlimited time in discussions, while other members were not allowed to exceed the time limit as provided by the By-Laws. This has been my personal observation on many occasions in the past: but, if indulged in by a presiding officer, can only result in dissatisfaction and discontent among the members, and will not rebound to the credit of such official when he shall have surrendered the gavel to his successor and has taken his place on the floor to be dealt with in the future as he has dealt with his fellow-members during his term of service.

It has been my endeavor during the past year to deal fairly and impartially with the members of this body, granting special favors to none and expecting none in return. For my conduct of the office I have no apologies to make. No mortal man could expect to please each and every member of so large and hyper-critical a body. I should most certainly have been agreeably surprised had I not been criticized to some extent for some act during the past year.

The year just closed might be properly classed as a stormy one. Some of these storm periods might be called "brain-storms," while others belong to what might be called ordinary "wind-storms." These storm periods, happily for the future of the Academy, have been safely passed through, and I trust that nothing but plain sailing now confronts us.

Many measures have come up during the past year for our consideration that have kept the Academy in a somewhat unsettled condition, chief of which was the incorporating of the body, and the very strenuous effort to secure a permanent home. It will long be a source of regret to those who favored the movement, and especially to the members of the Building Committee, that their efforts met defeat. I do not believe the issue to be a dead one; but I do believe that the time has not yet arrived when the plan can be carried to a successful issue. The first step in this direction should, in my opinion, be one looking toward securing a more harmonious action among the members, to an in-

crease in our membership; and a general awakening of interest among both the old and new members.

When the desired results along the lines mentioned have been attained, and not until then, do I believe the Academy will be ready and willing to accept earnestly and seriously the proposition to provide a home of our own. On similar occasions in the past, the retiring President has deemed it wise and necessary to incorporate in his address various predictions, recommendations, etc., for the good of the Academy. I shall deviate somewhat from this custom in that I shall make no predictions as to the future, but with your permission offer a few recommendations, which I believe if considered carefully and such as the Academy deems worthy, adopted, will give us during the next year a larger membership, and necessarily an increase in our revenue, a more harmonious feeling among the members, and generally speaking a better medical society than we have had in the past. These suggestions or recommendations I make after a careful study of the situation during the past year.

First: That the Academy take immediate steps toward securing a better hall in which to hold our meetings, that such place be convenient and accessible. That if such hall can be secured at a reasonable rental, that all or such part as may be necessary of the funds left in our treasury from the sale of the Mitchell property be used to equip such hall with comfortable chairs, carpets, desks, pictures, and suitable book-cases, sufficient to accommodate our rapidly increasing library; that a telephone be installed in this hall, owned and used exclusively by this Academy; that a competent and reliable janitor be provided, whose duty it shall be to have the hall in readiness on each regular meeting night, and such extra meetings as may from time to time be called, and he shall also have charge of the telephone during the progress of each meeting.

Second: That a change in the manner of arranging the semi-annual scientific program be made. Our present plan, under which we have been working for the past six years, seemed to work most satisfactorily when first adopted; but recently we have had no little trouble in arranging a program on account of mem-

bers not responding to the invitations mailed them by the Secretary. To the President, Vice-President, and Secretary, who constitute the committee on scientific work, I leave this vexing problem, with the suggestion that this matter should be looked into before the time for publication of our next semi-annual program. I believe that it would be no bad plan to arrange the names of the members in alphabetical order, and that the committee begin at the head of the list and interview each member in the order in which their names appear, thus giving each and every member an opportunity to have his name appear on the program, permitting him to select his own subject, and so far as possible the time for presenting his paper. This method would, I believe, produce better results than the plan under which we are now working.

Third: In the interests of the scientific work of this body, I would recommend that one meeting night in each month be set apart, exclusively for Case Reports and the exhibition of cases, either to replace the night for special addresses, namely, the first meeting night in each month, or to continue the program so far as applies to special addresses, and set apart one meeting night in each month for the special business of Case Reports, when each member who so desires can attend the Academy with the assurance that he will have an opportunity to make a Case Report, or exhibit a case. I believe that the majority of the members will agree with me that this would be a move in the right direction. I am prompted in making this suggestion by observing on many occasions that some members have, after having gone to considerable trouble to prepare a Case Report, and come to the meeting with that especial object in view, have been denied the privilege because of the fact that some member, after the closing of the discussion on the essay of the evening, becomes at once tired and moves an adjournment, and thus robs the member with his Case Report of his opportunity.

Fourth and last: I would recommend that Section 2, Article 5 of the By-Laws be amended so as to allow each essayist twenty-five minutes instead of twenty, as now provided, except special addresses; that the leaders of discussions be allowed fifteen min-

utes instead of ten as now provided; and that other members who discuss papers be allowed ten minutes and no more, and that no member be allowed to speak a second time unless he shall not have consumed his whole time in his first discussion.

I believe that the gentlemen who have preceded me in the Chair will sanction these changes of the By-Laws, and if such changes are made and adhered to strictly in the future they will result in much good to the Academy.

In conclusion I desire to thank the members of this body for the uniformly good attendance during the past year, and for the interest they have manifested in its success. I trust that we may have a prosperous and harmonious year, and that the newly-installed officials may so conduct the affairs of this Academy that at the close of the year just beginning they may be able to surrender their positions to the successors with the knowledge that they have done their full duty, and that the Academy may be in a better condition from every view-point than it is at the present time.

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## NERVOUS HEADACHE.

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BY W. T. MARRS, M. D., PEORIA HEIGHTS, ILL.

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HEADACHE is omnipresent and seems to have little regard for climate, season, or occupation. There are various types, depending upon the etiology and clinical manifestations. By far the most common is the nervous or sick headache which mainly attacks people in middle life. Women are much more susceptible, but men are by no means exempt. There are various factors of causation in this type of headache. Quite often it is thought to be due to reflex or peripheral irritation, prominent among which we may mention eye-strain, uterine and ovarian troubles, and sometimes affections of the rectum. Ocular defects are not now regarded with the same significance that they were a few years ago. It is also seldom that we find a uterus that is absolutely normal in function and location; so that we may to some extent eliminate, in my opinion, the reflex irritants in making up our



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etiology. At the present time one of the most tenable theories advanced as a cause for this severest of all headaches is that of the uric acid diathesis. The paroxysmal and more or less periodic nature of the attacks would lend tangible support to this theory. The greater nerve cells and centers seem to be overcome by a specie of toxicity which an attack of headache relieves and the sufferer enjoys freedom from pain until there is another recurrence. In turn this uricacidemia is dependent upon insufficient elimination. Heredity and a tendency to neurotic ailments play a significant role in this type of headache.

The symptoms are too familiar to more than mention in passing. There are certain prodromal feelings, such as lassitude, fatigue, etc., which the patient knows will eventuate in an attack. It is at this stage that the sufferer may materially lighten the spell by taking a few precautions. The seclusion of a darkened room and mild sedation offer the most relief in the way of aborting an impending attack.

The treatment embraces such remedies and measures as will afford temporary relief and so far as possible avoid recurrences. Elimination is of the utmost importance, but in order to be of signal benefit in ameliorating a paroxysm such remedies must be taken at the very onset. As remedies for this purpose nothing is of greater value than a few grains of calomel followed by generous doses of salines. As just suggested, the patient should stay in a darkened chamber and assume a recumbent position. The question as to whether to apply heat or cold to the head should be determined by the symptoms in each individual case. If there is an hyperemic condition of the brain cold is indicated and will afford much relief. If, however, there is an opposite condition warm applications will do more good. Sinapisms have been used from the beginning of time and will always be in favor. Acetanilide preparations, no matter under what name they are used, should be very sparingly employed. Coal-tar impairs the oxygen-carrying function of the red blood corpuscles and may produce untoward symptoms many weeks or months later. Peacock's Bromides I have always found to have a pleasant sedative action with no untoward after-effects. It should be given at the very beginning of the attack.

A long course of salines will sometimes be of permanent benefit to those afflicted with this ailment. From this we would be led to believe that the trouble might have its origin as an auto-toxemia. An occasional colonic flushing may be of value. Elimination from all the emunctories should be well maintained. The patient should not take, unless in moderation, coffee, tea, and alcoholics. Fruits, vegetables, and cereals should constitute the principal part of the dietary. The patient's social and business affairs should be such as will not draw heavily upon his or her nervous energy.

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### THE PROGNOSTICS OF *SMALL* HEMORRHAGES IN TYPHOID FEVER AND IN PHTHISIS PULMONALIS.

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BY Q. C. SMITH, M. D., OF SAN DIEGO, CAL.

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IN the present state of ignorance, *always* and *never*, do not belong to medicine and surgery. The occurrence of *small* hemorrhages from the bowels, in the second or third week of typhoid fever is valuable, both as a favorable prognostic indication and as an emphatic pointer as to proper *food* and other treatment of the patient.

When bowel hemorrhages, in the second or third week of typhoid fever, are so small as to be barely perceptible in the bowel discharges, such cases usually recover, provided they are not badly managed. The toxins that cause typhoid fever strongly tend to produce an antiplastic condition of the tissues and juices of the body; and said depraved tissues and body-juices, in turn, produce a softening, disintegrating, and spoliative effect upon the tissues of the body. Hence the food should be such as to most strongly tend to produce a *renovating* effect upon the depraved body-juices.

The best class of foods we have found for such cases, to nourish the patient and renovate the tissues, are the fresh juices of fresh, tender, green salads, such as turnip and mustard salads, and tender blanched lettuce and celery in form of fresh-made soups, which may be slightly thickened with well-cooked,

fine, fresh corn meal, slightly seasoned with salt to suit the taste, and just enough capsicum to be barely perceptible to the taste. Plain fresh-made corn bread, or plain fresh crackers, or fresh baker's whole-wheat bread, and fresh fruit juices from good quality of ripe apples, oranges, or grapes; or scraped raw, well-ripe apples or baked apples; also good quality of fresh buttermilk with a small per cent. of fresh sweet cream mixed with it, to be slowly taken by sips or eaten with aforesaid breads. All foods should be taken slowly, and very thoroughly masticated. Patients should not take food oftener than once every four hours, nor take more than two kinds of food at any one meal.

*Phthisis Pulmonalis.*—Small hemorrhages from the lungs in the early stages of phthisis pulmonalis as a general rule are a favorable omen, indicating the curability of the case in hand, provided judicious thorough treatment be perseveringly applied constantly for one to three years, both medicinal and hygienic.

Routinism has no place in the intelligent treatment of any form of any disease. Treat the *patient*, not the disease, much less its *name*. Patients whose phthisis pulmonalis originate as a sequel of a severe attack of grippe or measles do not usually have hemoptyses, and are difficult to cure; while those cases of phthisis pulmonalis that originate in a severe attack of grippe usually die within one year from date of primary attack.

1055 Fifth Street.

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## AN EFFICIENT FORMULA FOR USE IN RHINITIS.

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BY DAILEY APPLEBERRY, M. D., OF ST. LOUIS, MO.

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DURING the changeable spring weather it is no unusual matter for the physician to be called upon by his patients to treat their nasal troubles, among which the most common is, beyond all doubt, that catarrhal inflammation of the schneiderian membrane which is currently called rhinitis. It is that form which is not only annoying but very often painful. Among the symptoms which may manifest themselves are pruritus as well as an accompanying anosmia, both of which are exceedingly unpleasant to those so affected. There are many practitioners who begin

treating such cases by at once cauterizing the mucosa with stick nitrate of silver, with chromic acid, with the acid nitrate of mercury, or even with the galvano cautery.

These are methods which are but seldom indicated and should but rarely be employed, as the result of their use culminates in scars and a disagreeable condition of the nasal cavity with the constant formation of crusts.

Not long ago I had occasion to see and examine some patients affected with such catarrhal rhinitis, and the appearance presented was that of an angry-looking mucous membrane whose secretion was pronounced and inclined to become purulent. In all of these the patients were ordered to take appropriate tonic remedies, and for local application the following was ordered to be applied three or four times daily:—

R Hydrar. bichlor. .... gr. 1-4  
Katharmon ..... ʒ vi

M. Sig. Use four times daily in nose.

This acted like a charm, and in a comparatively short time my patients reported themselves well. It would not be a bad idea to combine white liquid hydrastis with the above; but, above all, see that there is a liberal amount of katharmon, for that is the ingredient that does the work. Those colleagues who will employ the above formula will find it among the valuable ones they possess.

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## Selected Articles

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### THE EARLY DIAGNOSIS OF GASTRIC CARCINOMA: A CLINICAL STUDY.\*

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BY W. GILMAN THOMPSON, M. D., PROFESSOR OF MEDICINE IN THE  
CORNELL UNIVERSITY MEDICAL COLLEGE IN NEW YORK CITY.

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THE early diagnosis of cancer of the stomach is a subject which appeals to the physician and surgeon with equal interest — to the physician, who may guide the patient's mode of life, and

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\*A paper read before the Cleveland Academy of Medicine, Feb. 15, 1907.

save him, perchance, from trying experiences in a vain search for health, useless journeyings, false hopes, and delusive expenditures for quackery; to the surgeon, who may offer him the possibility of prolongation of life, and decided mitigation or postponement of suffering.

My personal experience in diseases of this type has so often been to be told by the consulting surgeon that the case was either "not yet definite enough for operation" or that it was "too far advanced," that I have been led to carefully review the subject with the purpose of formulating anew the principles upon which early diagnosis should be based, in order that at least the second statement that the disease is too long established for operation, should not be laid at my door. To this end I have to present conclusions based upon a study of eighty-eight cases, derived during the past two years from the services of colleagues and myself in the wards of the Presbyterian and Bellevue Hospitals, from personal private cases and those in my clinic in the Cornell Medical College Dispensary.

By "early" diagnosis it is intended to include those cases in which the patient's condition still permits of his going about and permits of operation, if desirable, and in which, for the most part, no definite tumor is demonstrable by the ordinary means of physical examination.

It is of the utmost importance to establish the existence of a gastric cancer before a tumor is manifest, and to this end several laboratory tests have been added of late years to the means of diagnosis, the significance of which will form part of this discussion. Such are the improved methods of gastric analysis, the determination of occult blood in the stools or gastric contents, blood examinations, etc. The importance of diagnosis of gastric carcinoma before decided physical evidence of tumor is obtainable is enhanced by the fact that by the time the tumor is large enough to be clearly demonstrable, the patient is often too weak for operation or secondary growths have so far advanced as to render operation futile. Entirely apart from the question of operation, moreover, is the desirability of an early diagnosis and prognosis.

*Method of Palpation.*—The conditions which obscure the early palpation of a small gastric tumor are several. Too great thickness of the abdominal wall may prevent its determination until emaciation has rendered it possible. More often the difficulty consists in abdominal rigidity. To a great extent this is to be overcome by repeated daily examinations, by which the abdominal muscles are trained, so to speak, to relax. Sometimes the examiner is too superficial in his method and fails to palpate the abdomen with the patient in different positions, and especially offer a thorough examination of the bowels and allowing the stomach also to become empty—precautions which are often neglected. One of the most satisfactory methods of revealing a deep-seated small gastric growth is that which I have seen demonstrated by Ewald in his stomach clinic in Berlin. The patient sits in bed with knees partially drawn up, his head leaning backwards and resting upon the shoulder of the examiner, who, sitting close behind the patient on the bed, supports him, while he reaches around the patient and palpates the abdomen in front. By this means all the patient's muscles are relaxed and the natural ascent of the abdominal organs often allows a gastric growth to drop downward and forward within touch.

Epigastric rigidity, if persistent under such favorable conditions as those described above, is itself of considerable diagnostic importance, being usually due to reflexes caused by adhesions or the dread of elicitation of pain and tenderness. It is seldom necessary to submit a patient to the inconvenience of primary anesthesia if the above methods be employed.

In some cases a growth is found deeply out of reach by adhesions or lies behind the liver. A patient recently died in hospital after a two months' illness with gastric carcinoma. Although he was much emaciated on admission, and although I made almost daily search, I was unable to demonstrate a gastric tumor on more than two or three occasions. The autopsy showed that the mass, which was fully three inches by two, lay in part behind the liver and was further obscured by a greatly dilated stomach. The only times when the mass was demonstrable were, therefore,



when the stomach happened to be completely empty, although it was not bound by adhesions.

Again, failure to demonstrate a mass may be due to the fact that the carcinoma has taken the small nodular or diffuse infiltration form, rather than that of a palpable scirrhous tumor.

There is a condition which, in elderly men, often adds to the difficulty under discussion, namely, where chronic emphysema has caused considerable increase in the diameters of the lower thorax, with eversion of the lower ribs. As emaciation proceeds the skin becomes stretched so tightly across between these ribs that deep palpation in the epigastrium becomes impossible. In one case of this type I was able to palpate only secondary glandular enlargement, the principal pyloric mass being obscured in the manner described.

Exceptionally it may happen that inflation of the stomach with gas brings forward into touch a gastric tumor which had not been previously palpable, but as already stated, distension of the stomach is more likely to obscure the mass in part, no doubt, by increasing the rigidity of the abdominal wall.

The cases of this series presented no constancy in family or previous history from which any conclusions might be drawn to favor a correct diagnosis. Heredity plays no conspicuous part as a factor. In only three cases was there a history of any form of cancer in the family. One exception was the case of a woman forty years of age who told me that her father died of stomach cancer. But she is a Swede, her father died many years ago, and more exact evidence of the correctness of the diagnosis was wanting.

The second exception was the case of a man forty-six years of age who stated that his father had a cancer of the face. The third was that of a man forty-five years of age whose father had died of a cancer of the larynx.

Contrary to prevalent belief among the laity and to the statements of many text-books (which are themselves more or less hereditary) it does not appear that carcinoma is in any true sense a markedly hereditary disease. The great majority of patients give no such history and as for the small remainder it should

be recognized that with so common a disease, the ordinary laws of chance would place a certain number of duplicate cases in the same family.

The United States census gives the mortality rate for cancer of the stomach per 100,000 population as 47.9 in 1890 and 60 in 1900. The total number of deaths from this cause in this country in 1900 was 4,220. Among so many cases it would be highly singular if few did not occasionally occur in duplicate in the same family.

Similarly *social status* and *occupation* were entirely without uniformity in influence; nor did the patients' *previous habits* as to diet, alcoholism, etc., or the acquirement of chronic disease, such as syphilis or arterio-sclerosis, appear to have any predisposing effect in any one case, more than another. The factors of *age* and *sex* are much more definite, and it is interesting to note that of the 88 cases only 16 or 18 per cent. occurred in women. This is interesting because it shows how easy it is to derive wrong conclusions from a small number of cases. This disproportion in a few examples is entirely annulled by the figures of the United States census returns for 1900, by which the proportion of gastric carcinomas between the sexes was shown to be almost equal in the fatal cases, there being 2,195 among males and 2,025 among females.

The extremes of age, in my series, were 31 years and 75 years, but 36 of the 88 cases were recorded between 40 and 50 years. Among the 4,220 fatal cases reported in the United States census for 1900, nine patients were under 20 years of age and more than one seventh or 633 cases occurred between the 60th and 64th year.

*Loss of muscular strength and of weight*, even without definite gastric phenomena are among the most constant early symptoms and bear no definite proportion to the size or position of the growth. In general, these symptoms are liable to occur earlier and become more pronounced earlier in cases of gastric or hepatic carcinoma than when the disease is situated elsewhere, but there are many exceptions. Naturally a diffuse growth that destroys the secretory surface or inhibits the functions of the stomach

would be expected to interfere with nutrition. That such interference is not always due to a toxemia derived from the growth is proved by the improvement in strength and weight which may follow a gastro-enterostomy, although the growth has not been disturbed. In other cases, however, the toxemia must be held responsible, for the complete failure of nutrition and consequent loss in weight is quite out of proportion to the size of the growth and is, in fact, independent of its position. It is no doubt true, as in other chronic disease, that constitutional power of resistance is an important factor, and exceptionally one meets with large gastric growths in persons whose nutrition is still fair. (On the other hand, in many cases of this series, the loss of weight amounted to from forty to fifty pounds in a year.

Hypokinesis with stagnation of food and dilatation of the stomach, especially with visible peristalsis, are very important and reliable conditions from the diagnostic standpoint of cancer, when present under certain circumstances; for example, when dilatation appears rather suddenly in a patient past forty-five or fifty years of age, who has been always temperate in both eating and drinking, who has been in previous good health, and who has presented none of the marked symptoms of a chronic gastric catarrh. If the dilatation is not due to muscular weakness of the stomach wall, or distension by overeating or drinking, it is inevitably due to obstruction in or about the pylorus, which in the great majority of cases of this type is found to be a carcinoma. I have seen three cases this winter in which gastric dilatation was apparent long before any tumor could be determined. In one case the diagnosis was confirmed by autopsy, in a second by the subsequent appearance of secondary nodules and finally of a pyloric mass, and in the third by the subsequent demonstration of a tumor. This last one affords so good an illustration of the importance of not regarding prolonged "dyspepsia" too lightly in men of fifty, that I cannot resist giving one or two details. The patient, a temperate, reticent man, fifty-four years of age, had complained for six months of vague gastric distress without nausea or pain, but accompanied by a loss of some twenty pounds in weight and general weakness. Three

or four days before coming to me he consulted a well-known and able practitioner whose sole procedure consisted in having the patient put out his tongue (which, by the way, was normal), telling him he had "dyspepsia," and giving him nux vomica! In reality, this man was found to have a condition which my class of fourth year medical students subsequently correctly diagnosed merely by taking a little pains; namely, a stomach reaching two inches below the umbilicus, and bulging the abdominal wall, with succussion audible across the room! The man was without cachexia, but some time later examination in the sitting posture above described revealed a small pyloric growth. Operation was advised and refused.

In testing for lack of gastric mobility and stagnation of food contents, spinach is an excellent substance to employ, for it is easily distinguishable in stomach washings and is scarcely altered by the gastric juice. In some cases of this series, it was detected in stomach washings more than twenty-four hours after ingestion.

Food stagnation does not necessarily imply dilatation, for it may occur in simple gastroparesis, or in simple gastric atony, or it may be due to weakness of the stomach wall caused by a growth which does not include the pylorus. It may in fact occur in carcinoma of the cardia. In connection with other symptoms, however, although without accompanying dilatation, it is a valuable aid to diagnosis.

*Failure to improve radically under treatment* is a very important diagnostic indication, especially in regard to gain in weight and in the blood composition. Patients with gastric cancer not infrequently improve both under treatment and spontaneously, but to a limited extent and for brief intervals only. A patient at present under hospital care, after being at death's door with emaciation and daily, almost hourly, vomiting, has improved so far spontaneously as to be up about the ward and complain of an excessive appetite. Such intervals of betterment are delusive, however, and of short duration, whereas, the patient with chronic gastric catarrh, simple gastric dilatation, or other non-malignant gastric conditions, can usually be made to show substantial and permanent improvement under treatment.

The *blood examination* is of interest and the changes are those of a secondary anemia, appearing early in the disease and often before a tumor is evident. Analyses have been made in twenty-seven recent cases in the Clinical Laboratory of the Cornell University Medical College, and the results have been furnished for purposes of this discussion by Dr. Thomas W. Hastings, Director of the Laboratory. They cover the range from ambulatory cases which were treated in the Cornell Dispensary, to the bedridden patients in the wards of Bellevue Hospital. In almost all cases leucocytosis was present, the average count showing 12,000 to 16,000. In several cases it was as high as 32,000, and in only two was it below 8,000. The polynuclear cells were frequently increased, being between 80 and 90 per cent. in more than one third of the cases. The percentage of lymphocytes varied considerably, being sometimes as high as 35 per cent., or as low as 5 per cent. The hemoglobin, on the average, was reduced to about 60 per cent., although the percentage was sometimes much lower. In a case of another series, it fell as low as 13 per cent. just before death. The color index, in marked contrast with that of pernicious anemia, is low, averaging .75 to .80. The erythrocytes are diminished, but not often below 3,000,000, and as many as 3,500,000 may be present just before death. They are somewhat pale, but otherwise usually little altered in form or reactions. In some cases there is poikilocytosis and moderate polychromatophilia. In some cases there is surprisingly little anemia, although the leucocytosis is present. One patient, for instance, who was shown at operation to have a carcinoma of the cardiac end of the stomach large enough to have caused regurgitation of food for five months, showed 4,800,000 red cells and 73 per cent. hemoglobin. In another case in which hemorrhages had reduced the red cells to 2,976,000, the number rose, after a month's treatment, to 4,900,000, with a leucocyte count of 11,000, and 72 per cent. polynuclear cells.

In conclusion, the important early characteristics of the blood are (1) a moderate leucocytosis (12,000-16,000); (2) polynucleosis; (3) moderate anemia (with red cells rarely below 3,000,000, and hemoglobin 60 per cent.).

*Vomiting* is an early symptom in a large number of cases (in one fourth of this series). It is often persistent and may bear little or no relation to the ingestion of food. It may be quite uncontrollable, as in a case of this series in which, having lasted continuously for two weeks, it was only relieved by a gastro-enterostomy. It is well to examine the vomitus carefully microscopically for red blood cells, and to use the guaiac or other test for so-called occult blood, although of course there are many other causes than cancer for a positive blood reaction, and it is important not to place too much reliance upon this test.

Hematemesis occurred as an early symptom in eight cases of the series, *i. e.*, it was one of the first symptoms of which the patient complained, in addition to loss of strength and weight.

The examination of the *stools*, while it shows but little of diagnostic importance as a rule, should not be neglected. Usually scanty, light-colored, and hard, they occasionally contain blood, and much has been written of late regarding the determination of occult blood in the feces. I have had this test made in a number of instances, but do not feel that much more reliance is to be given it than in the vomitus examination. In the first place, it has been absent in a number of advanced cases with large gastric tumors, and, secondly, the blood may easily come from other sources, especially where hemorrhoids are present, or where hardened feces irritate the rectal mucosa or sphincter in grazing over it. I should say regarding this occult blood test, that in cases with obvious tumor it is superfluous except in so far as it may indicate erosion, and in the doubtful cases it admits of too many other interpretations, to rank as more than slightly corroborative evidence, provided other symptoms are also present. As an independent test, it is worse than useless, for it may give rise to wholly fallacious conclusions.

Occult blood may be observed in the feces in cases of gastric ulcer, benign pyloric stricture and spasm, duodenal ulcer, intestinal tuberculosis, intestinal parasites, etc. The test has the further disadvantage that in order to perform it, it is necessary to withhold certain very desirable foods from the patient for several days, such as beef juice, scraped beef, etc., which themselves contain blood.

*Epigastric pain* is a singularly variable symptom. (One meets with fatal cases with large gastric growths, in which the patient has made no complaint of pain at any time. In other cases pain is an early and constant symptom, long before any mass can be demonstrated. It was an early symptom in only eighteen out of eighty-eight cases of the series, and in half of these only was it constant and severe. When present is it usually of a dull, boring, steady type, less affected by the ingestion of food than the pain of gastric ulcer. Many patients who at first state that they have suffered much from pain, admit on closer questioning that they have had merely a sensation of gastric weight, fulness or oppression and no real pain at all. Similarly pain in the back, said to be due to secondary involvement of retroperitoneal glands, is quite infrequent in my experience, and I believe it to be of little early diagnostic value. That peculiar type of pain which sometimes accompanies gastric ulcer, and which is elicited by upward pressure against the diaphragm while the patient coughs and thereby stretches adhesions, is absent from early carcinoma. The pain of gastric cancer, when present, is usually due to ulceration, pressure, or gastric distension, and hence is unlikely to be an early symptom. It is often relieved by operation.

Tenderness over the epigastrium, while commonly more or less obvious in the presence of a large mass, is by no means constant as an early symptom, and should rank with pain therefore as being of minor importance on the negative side, *i. e.*, its absence is no argument against the existence of a carcinoma, and its presence may be due to many other causes. Rectus rigidity predominating to the right of the epigastrium is more often present, and hence may occur without pain or tenderness. When the liver is not enlarged below the free border of the ribs, marked and persistent rigidity on the right side of the epigastrium is a very valuable diagnostic sign.

The analysis of gastric contents is of the greatest interest in connection with carcinoma. Before drawing any conclusions it will be well to emphasize the importance of making consecutive analyses, rather than relying upon a single one. There are several reasons why a single analysis may prove misleading:

(1) The dread of the first passage of the stomach tube may inhibit secretion. (2) The usual "test meal" of a roll and glass of water is not particularly appetizing to stimulate a secretion which is known to "wait on appetite." (3) The secretion may be inhibited from circumstances affecting the patient's general condition, as so often happens in neurasthenia.

For several years Dr. William Armstrong has conducted all the gastric analyses in my clinic in the Cornell Dispensary, and his custom has been in almost every case to make at least three analyses on alternate days, often varying the composition of the test meal, giving a Riegel and Leube test meal one day and a modified meal of his own the next, etc. It has been interesting to note in what a large number of general cases other than carcinoma there has been variation from hyperacidity to hypoacidity or even anacidity on consecutive days, or every other day for a week. To emphasize this point, which appears very important, I will briefly enumerate a few cases from among many hundreds of Dr. Armstrong's analyses:—

A man with chronic colitis and no gastric symptoms, three analyses, no free acid. A man 52 years of age, stomach of normal size, no gastric symptoms whatever, three analyses with no free hydrochloric acid, and combined acid recorded in the three analyses, respectively, as 20, 30, and 25. No diagnosis was made other than anacidity. This patient had lost 20 lbs. in six months. A case of chronic diarrhea with no free acid in tests. A case of alcoholic gastritis with no free acid in three tests and combined acid varying from 0 to 40. A case of gastrophytosis and chronic diarrhea, no free acid in three tests. Six cases of neurasthenia and no free acid in three tests. A case of chronic catarrhal gastritis, no free acid in three tests, and combined acid varying from 33 to 60. Two cases of neurasthenia in which the first test showed no free acid, the second 8 and 32, and the third test 40 and 45, respectively. Two other cases showing the reverse conditions, first test 52 and 46, second test 10 and 58, third test 0 and 0.

In one case of carcinoma of the cardia, with diagnosis proved by operation, there was total anacidity in three tests, and a trace of free acid was present in a fourth test.



As regards carcinoma of the stomach in general, I think that more aid is to be derived from a study of gastric hypomotility with food stagnation and gastric enlargement as shown by experimental distension with air or water than by the tests for hydrochloric acid. Certainly a large number of patients with gastric cancer maintain a reasonably good stomach digestion until the disease is well advanced, even to the extent of the appearance of a palpable tumor, and in not a few, free hydrochloric acid may be obtained until the end. Hence the presence of free hydrochloric acid is no argument against the existence of gastric cancer.

Sahli's test for free hydrochloric acid in the stomach is most ingenious, and if it proves to be reliable, has the advantage that it does not require the passage of a stomach tube. It is performed as follows: One grain each of powdered iodoform and methylene blue are placed upon a small piece of thin dental rubber dam, not over an inch square. The ends of the square are then gathered together so as to make a tiny bag, and firmly tied with a piece of crude (not sterilized) catgut. The bag, which is about the size of a large pea, is then swallowed by the patient immediately after a meal. If no free hydrochloric acid be present the bag passes on and is voided unopened with the stools, for the catgut with which it is tied is not dissolved in a neutral or alkaline medium. If, however, free hydrochloric acid and a little pepsin be present, the catgut dissolves, liberating the contents of the bag. The patient's urine is examined in about six hours and again in twelve hours, and it will be found to be stained bright blue by the aniline, and also to give an iodine reaction. In a number of cases in which I have tried it, the test has given a uniformly positive result, but I have not yet had opportunity to demonstrate its negative value, not having had a recent case of total anacidity. A control experiment should be made by placing one of the bags in a solution of 0.2 per cent. hydrochloric acid with pepsin, and another in a solution of pancreatine. The test, of course, is merely a quantitative one, but it may be used in patients who are so feeble as to make it undesirable to pass a stomach tube. I used it in such a case recently. The patient had a much dilated stomach, and a pyloric carcinoma, and died of gradual starvation.

The pathologist who made the autopsy was surprised to find a small thin square piece of material floating in the stomach, which proved to be the gutta percha swallowed three weeks before. The pyloric orifice was narrowed to a size barely admitting a probe, and this suggests the inquiry, Would not, in such a case, the small sheet of rubber be apt to lie over the pyloric opening and close it completely like a valve, whenever any current of food material should attempt to pass into the intestine? This would certainly increase the dilatation and make matters much worse. In the case referred to, however, no new symptoms appeared which suggested the continued presence of the rubber in the stomach.

A few cases of gastric carcinoma have been reported in which there has been hyperacidity at the time of operation.

The demonstration of lactic acid in the stomach contents is even less reliable than the free hydrochloric acid test. In one case of this series, in which much improvement and gain in weight followed operation, neither acid was found in three tests. In another, a trace of lactic acid was observed only once in three tests, and this acid was present in a variety of Dr. Armstrong's cases, including neurasthenia, chronic diarrhea, alcoholic gastritis, etc.

The finding of the Boas Opler bacillus is too inconstant to be of use in early diagnosis, and tumor fragments are not only rare, but are not found early enough to be of practical value.

*Dyspepsia.*—I had hoped that the study of these cases would throw more definite light on the question of how long general symptoms of gastric dyspepsia usually exist before the suspicion of carcinoma may be legitimately aroused. By the term "gastric dyspepsia" may be included such a common group of symptoms as pyrosis, flatulency, sensations of weight, fulness or distension after eating, occasional slight nausea, and a still more occasional temporary ache, a coated tongue, foul breath, etc.

It is somewhat disconcerting to tell a patient that he has merely "dyspepsia," and have him develop definite symptoms of cancer within a short time, not necessarily within three days as in the case referred to above, which was due to pure carelessness or neglect, but within six months or a year. The patient and his

friends are never convinced that the "dyspepsia" has not all along been a forerunner if not the cause of the carcinoma, and are likely to think that the physician should have aborted the cancer or at least discovered it at its incipency. (One of our patients at the Presbyterian hospital was discharged "cured" of gastric dyspepsia, who within a year returned and died of gastric cancer, as proved by autopsy. Was it all the same disease? I fear it was, yet there must be a limit placed upon such assumptions. From analysis of the eighty-eight cases it appears that recurrent attacks of "dyspepsia" in one case lasted fifteen years; in another (patient operated upon) only two weeks, and there were various other periods. Very many patients gave no history of dyspepsia prior to their general breakdown in health. The first symptoms noted varied greatly, but in a majority were decided loss of weight and strength, rather than marked dyspepsia. In others, the first symptom noticed by the patient was repeated vomiting, and in several cases hematemesis.

Dyspepsia is so frequent without cancer, and often plays so little part in connection with it, that it must be concluded that it is not a necessary predisposing cause. Moreover, from what is known of the average duration of gastric cancer, it seems fair to assume that dyspepsias which have preceded the development of definite cancer symptoms by more than a year have nothing to do with that disease, but are merely incidental. In thirty cases of the series the patients had complained of no symptoms of any kind up to six months or less of the time at which the diagnosis of cancer could be established with reasonable certainty, and in eight of these cases the symptoms could not be dated further back than two months.

*Fever.*—It is well known that a low grade of fever accompanies gastric cancer, at least towards the termination of the disease. In the 88 cases of the series it was absent in only 13 instances. It is very irregular in type, lasting several days or weeks and spontaneously subsiding. It is characterized by periods of subnormal temperature, observed either on the same day with the fever or on groups of days alternating with it. In the cases of the series the maximum temperature was  $103.5^{\circ}$  F., and the minimum

95° F., and the average range was between 101.5° F. and 97° F. While probably not a very early symptom, the fever often occurs before there is marked physical evidence of a tumor or in fact marked emaciation. The explanation of the temperature is in part that it is due to a toxemia developed by the growth, the same in fact which destroys nutrition, but it is also due in the terminal cases no doubt to disturbance of the normal heat regulating mechanism, and lessened activity of metabolism. Its presence makes for the existence of carcinoma when other chronic diseases are excluded, which might give rise to the same type of fever, such as the terminal stages of cirrhosis and chronic endocarditis.

*Cachexia.*—The expression “carcinomatous cachexia” is difficult to define in terms which are absolutely distinctive, yet in a certain proportion of cases the patient’s appearance alone gives rise to a suspicion of malignant disease. The difficulty with the cachexia is its extreme variability and often lateness in becoming definite and distinguishable from that of other diseases. When clearly established it comprises marked emaciation, with a drawn facial expression, a dry, wrinkled, inelastic skin, a color which may be a dead white, or of a muddy, sallow hue, with irregular patches of brownish pigmentation, and sometimes a subicteroid mixture, with yellowish cornea. There is marked absence of edema, but there is considerable secondary anemia with leucocytosis.

If one confines the somewhat vague term cachexia to the patient’s general appearance it is a most unsafe guide to diagnosis, for it may either be entirely absent until shortly before death, or it may simulate other appearances, such as those of extreme cases of chronic gastric catarrh with dilatation, melancholia, chronic gastric ulcer and cirrhosis.

There are cases of gastric ulcer, especially those with pyloric tumor, which are difficult to diagnose from carcinoma, even at the time of operation, for a dense cicatricial mass about the pylorus may closely resemble a scirrhous growth. Such a case came under my observation a few months ago. The patient was a Swedish woman fifty-four years of age, who had had indefinite symptoms of indigestion for two months without epigastric pain, tenderness,

rigidity, or palpable tumor. For two weeks before admission to the hospital she had had uncontrollable vomiting, and the vomitus, which contained neither free hydrochloric or lactic acid, showed a small quantity of blood. The woman had a series of large multiple cystomata of the ovaries, causing partial intestinal obstruction. There was no leucocytosis, there being only 7,000 white cells with 4,500,000 red cells and 77 per cent, hemoglobin. Although the possibility of gastric carcinoma was discussed, the patient had no cachexia and no emaciation. It was therefore concluded that the vomiting, which persisted for two weeks, despite every effort for its control, was due to reflex irritation and an autotoxic state, caused by intra-pelvic pressure and partial intestinal obstruction. The small amount of blood in the vomitus might have been due to retching. Removal of the very large and numerous ovarian masses was accomplished by Dr. Ellsworth Elliot, Jr. At operation it was decided to examine the stomach, and a large, hard, elongated tumor was found to embrace the pylorus and first part of the duodenum. Gastro-enterostomy was performed and the patient left the hospital a few weeks later, able to digest considerable variety of food. In this case, the incidence of another operation gave a chance opportunity to examine the stomach, where most serious disease was found to exist in a patient whose history and condition afforded no ground whatever for suspicion of the presence of a tumor. The operation saved her life, but for how long will depend upon the undetermined nature of the pyloric mass.

Special features which may aid in distinguishing gastric ulcer from carcinoma in these borderline cases are the greater frequency and severity of paroxysmal pain in ulcer as a rule; the lesser degree of emaciation, and the absence of the leucocytosis and polynucleosis which characterize cancer. As a rule in ulcer, hemorrhages are more frequent, and there may be persistent hyperacidity, but the truly difficult cases are those in which all of these signs fail, or the comparisons are reversed, and not a few supposed gastric carcinomas have been shown at operation to be benign cicatricial masses, all which strengthens the argument for early exploration.

Melancholia is often accompanied by extreme emaciation, and more or less gastro-intestinal disorder. A patient who was in perfect physical and mental health last June came to me six months later so changed that I scarcely knew him. He was a man forty-seven years of age, who, after financial reverses began to worry, and to lose weight until he lost more than forty pounds. His complexion was sallow, in fact of a subicteroid hue, and he complained of complete anorexia, constipation, and the usual "dead feeling," as such patients often describe their abnormal abdominal sensations. He was so emaciated and cachectic as to distinctly suggest the diagnosis of a gastric carcinoma, but he had no leucocytosis and his blood was not even anemic; he had no vomiting or epigastric pain or any symptom of gastric disease, and no tumor; moreover, his mental depression amounted to a true delusional melancholia. He improved so far under treatment by wholesome mental occupation, fresh air, forced feeding, intestinal antisepsis and evacuants, as to practically exclude the possibility of carcinoma, although it was several weeks before I felt certain of it.

Pernicious anemia might be mistaken for malignant disease of the stomach, especially if gastric or intestinal hemorrhage has occurred. The pernicious anemic patient, although pale and weak, does not emaciate to any great degree, and the color becomes of a distinctive lemon yellow shade, in contrast to the dead white pallor of cancerous secondary anemia. The blood examination in pernicious anemia has its peculiarities of relatively high color index, leucopenia instead of leucocytosis, with megalo-blasts and poikilocytosis. One of my patients who died last month of carcinoma of the pylorus, as proven by autopsy, presented a hemoglobin percentage of only 13; the red cells were diminished and the color index was low, whereas in fourteen cases of pernicious anemia that I have elsewhere reported (*Bellevue Hospital Reports*, Vol. I, 1904), the color index was invariably either normal or more often considerably above normal, and there was no increase in polynuclear percentage, as in carcinoma.

Among the difficulties of diagnosis may be briefly mentioned such unusual complications as the following which developed among the cases of this series:—

One patient, a man fifty-six years of age, declared that he felt well up to within three weeks of the time of admission to the hospital, when he first noticed a general swelling of the abdomen. He was found to have ascites with an atrophic cirrhosis. At autopsy a small scirrhus carcinoma of the stomach was found which had been obscured by the ascitic fluid, and, in the entire absence of gastric symptoms or carcinomatous cachexia, was naturally unexpected.

Another man declared that he had been at work to within a fortnight, feeling perfectly well. He complained only of pain in the lower abdomen, and presented a tumor of the caput coli. This proved to be due to impaction, which was relieved. He appeared cachectic, however, and after death, which occurred in a few days from exhaustion, a fair sized scirrhus tumor of the pylorus was found. He also had never had any gastric symptoms.

A third fatal case gave rise to the diagnosis of carcinoma, although no abdominal mass was discoverable at any time. The autopsy showed a disseminated combined scirrhus and colloid carcinoma involving the stomach, mesenteric and omental glands, left kidney, suprarenals, pancreas, liver, intestinal wall, pleura, and pericardium.

Having determined an early diagnosis of gastric carcinoma, or at least having determined a reasonable probability of its existence, it remains to consider the feasibility of operation. One would naturally decide against operation in cases complicated by serious cardiac, pulmonary, or renal lesions, advanced arteriosclerosis, extreme anemia, the evident secondary involvement of the liver, etc. Apart from such cases are a large number in which the gastric question is the only one.

Recent medical literature contains many strong arguments in favor of operation. In an editorial in the *Journal of the American Medical Association*, May 28, 1904, the following statement is made:—

“Exploratory laparotomy has never been given a fair trial as a means of early diagnosis, having been practically restricted to the detection of the eradicability of the lesion. A suitable in-

cision can be made under local anesthesia with little discomfort, practically without danger, and causing only temporary disability, and it would seem that it should be resorted to when there is a reasonable suspicion of the existence of a carcinoma."

William J. Mayo (*Jour. Amer. Med. Assoc.*, June 11, 1904), wrote:—

"The only necessary thing for success is an early diagnosis, and this must be on clinical grounds, supplemented by early exploratory incision."

John C. Munro in the *Boston Medical and Surgical Journal*, Jan. 19, 1905, presents a strong plea for early operation in all cases that are not absolutely prohibitive through complications or the patient's weakness.

Joseph A. Blake, writing in the *New York Medical Journal*, on Oct. 27, 1906, states that "the cancers of the stomach most amenable to operation are those of the pylorus, chiefly because they obstruct early. . . . Stagnation, ever so slight, particularly if increasing and attended by visible peristaltic waves in the epigastrium demands surgical intervention. Do not wait for tumor, diminished hydrochloric acid, or dilatation." Further, he states that "in pyloric obstruction, no matter of what variety, operation is conceded by all to be the proper treatment, for the simple reason that internal treatment at the best is only palliative and surgery affords such brilliant results."

Leriche (*Bul de l'Acad. de Med.*, Paris, LXX No. 36) collected recently from the literature 1,300 cases of resection of the stomach for cancer, complete and partial, with a mortality of 20 per cent., but as most of the failures seemed traceable to errors in technique, he is disposed to take a very favorable view of the operation.

Mayo's last statistics for partial gastrectomy for carcinoma show that among eighty-one operations the mortality was 14.5 per cent., but in the last twenty-five cases it was only 4 per cent., and one fourth of the patients were still living, three years subsequent to operation, a record quite as favorable as that for most other operable cancers.

The plea of this discussion is for the earlier recognition of



gastric carcinoma, based upon careful clinical study, and for early operation, *i. e.*, operation before waiting for a tumor to appear, in a much larger proportion of cases than are at present passed from the physician to the hands of the surgeon.

In conclusion I would summarize as follows the conditions which combine to make operation not only justifiable but desirable.

1. The patient's age should be within the average cancer developing period for gastric cases, *i. e.*, between forty and sixty-five years.
2. There should be a rapid and decided loss of weight and strength, without other assignable cause, such as chronic gastric catarrh, neurasthenia, mental strain or worry, or chronic general disease, such as diabetes, etc.
3. There should be evidence of some degree of stagnation of food contents in the stomach.
4. There should be failure to improve in marked degree under treatment after a few week's trial.

With these four conditions fulfilled, exploration should be seriously considered, despite the absence of gastric pain or other marked gastric symptoms. In addition there may be —

5. A leucocytosis of 12,000 to 15,000 with polynucleosis and a moderate secondary anemia, with low color index.
6. Decided dilatation of the stomach.

With these two additional factors, operation is distinctly indicated. Still further there may be —

7. Occasional attacks of vomiting without definite relation to food ingestion.
8. Occult or visible blood in the vomitus or stools.
9. Epigastric or right hypogastric rigidity and tenderness on deep pressure.

With these symptoms added, the diagnosis can admit of practically no question. In this order of relative importance of symptoms I have purposely left until the last, as being often unreliable —

10. The demonstration of hypoacidity or anacidity, and —
11. The so-called carcinomatous cachexia, which, while plain enough toward the fatal ending, is often wanting as an early definite appearance.

By thus grouping the train of symptoms and conditions in relative order of their appearance and importance, it becomes possible to recommend operation at a period when there is hope of accomplishing something more definite than mere exploration. As to what is to be gained by early operation, there is first, always the relief of uncertainty as to the extent and nature of the disease, and as to any possibility of error in diagnosis. Second, there is the possibility of complete extirpation of the growth and prolongation of life for three or four years before a fatal and irreparable return. Third, there is the certainty not only of some prolongation of life, but of relief from much increasing suffering, particularly from that most wretched of deaths, by slow starvation, with constant nausea, regurgitation and pain from a distended and useless stomach. Even in the later cases in which a growth of considerable size is obvious, operation may be of advantage as a palliative measure whenever the growth obstructs the pylorus, causing dilatation. There is a woman in my wards at present in Bellevue Hospital upon whom a gastro-enterostomy has been performed six weeks ago. She had at that time a nodular gastric cancer, forming a mass five or six inches in diameter, and causing incessant vomiting, and pain through dilatation of the stomach. Since operation she has been entirely free from vomiting, pain, or distress of any kind, and is merely dying in peace from slowly advancing asthenia. None of the post-operative cases that I have seen have suggested any cause for regret in the performance of the operation, for the late cases cannot be made any more miserable than they are under medical treatment alone, and the early cases always present at least a fair chance of very radical relief.—*The Ohio State Medical Journal.*

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### **Editorial.**

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#### ANNUAL MEETING OF THE NASHVILLE ACADEMY OF MEDICINE.

At the annual meeting of this, the Davidson County Medical Organization, the following officers were elected: President, Dr. M. M. Cullom; Vice-President, Dr. R. E. Fort; Secretary and Treasurer, Dr. H. M. Tigert.

After the business of the evening was transacted, Dr. Geo. W. Crile, of Cleveland, Ohio, the guest of the Academy, delivered a most excellent address, his subject being, "The Therapeutic Results of Direct Transfusion," illustrating the two most recent and effective methods. The following brief "abstract" was kindly furnished by the distinguished visitor:—

"The therapeutic results in the direct transfusion of blood may be grouped into three classes: positive, negative, and undetermined. Among the positive results is transfusion in acute hemorrhage, which is apparently final. In pathologic hemorrhage it has proven positive in improving the patient's immediate condition, and in most instances wholly controlled the hemorrhage itself. In shock its value seems far greater than any remedy hitherto employed by me. From the experimental standpoint it seems to be the most effective treatment of illuminating gas poisoning.

"Among the negative results are transfusion in pernicious anemia, leukemia, carcinoma, strychnin poisoning, and diphtheria toxemia.

"Among the undetermined results may be mentioned chronic suppuration with its attendant debility and anemia, tuberculosis, and the self-limiting diseases.

"Of the twenty-one clinical cases, all were technically successful. In every instance the donee experienced a heightened vitality, and in the absence of serious organic disease the patient became buoyant, even jocose. Some had chills during transfusion or soon after and a majority showed some febrile reaction later. It is our intention to go over the field and endeavor to establish limitations as well as values, and this paper is but a further report of progress."

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#### THE TENNESSEE STATE MEDICAL ASSOCIATION.

THE seventy-fourth annual meeting of the State Medical Association held in this city, April 9-11, was in every way most satisfactory. The attendance was unusually large, and representative members from all sections of the state were present. The papers read will compare favorably with those of preceding meetings, as will the discussions thereon.

The following officers were elected: President, Dr. A. B. Cooke, of Nashville; Vice-Presidents, Drs. R. E. Fort of Nashville, Chas P. McNabb of Knoxville, and Robt. W. Tate of Bolivar; Secretary, Dr. Geo. H. Price, of Nashville; Treasurer, Dr. W. C. Bilbro, of Murfreesboro, the two latter re-elected. Delegate to American Medical Association, Dr. S. W. Woodyard, of Greenville; alternate, Dr. C. E. Ristine, of Knoxville.

Time and place of next meeting, April 14, 15, and 16, 1908, at Knoxville.

## THE PURE FOOD AND DRUG BILL.

THE General Assembly of the State of Tennessee at the session just closed passed a "Pure Food and Drug Bill" (The Marr Bill), and the same having been signed by the Governor is now a law. This is virtually a re-enactment of the National law by the last Congress, and was made necessary by reason of the "State's Rights" principle which a National House of Representatives and Senate, although largely Republican, was forced to recognize, as the Federal law could only apply to interstate commerce.

Under the state law as it now stands, the regulations and enforcement of the enactment was very properly placed in the hands of the State Board of Health, the proper functionaries under whose care it should be placed. A number of more or less questionable procedures were resorted to by opponents of the measure, one being no less than stealing the original bill and substituting for it another, by which the enactment would have been placed in other hands than those to which it most properly belongs. A very active and powerful lobby was also on hand, using extraordinary efforts, which if successful would have defeated the purposes of effective legislation. However, aided by continuous efforts on the part of the Committee from the State Medical Association, headed by Dr. A. B. Cooke of this city, the original Marr Bill is now the law of the land.

The honest and reputable druggists and grocers have no need of apprehension as to the results of the National or State law as they now stand. The selling in more or less concealed form, deleterious drugs and impure foods has done incalculable harm and injury. The dishonest dealer in drugs especially should be suppressed. It is difficult to estimate the injury that can be traced to the sale of dangerous drugs, such as opium and its preparations, cocaine, etc., and self-respecting druggists owe it to themselves to aid in every possible way the enforcement of laws designed to stamp out this dangerous traffic. To the manufacturer and dealer in reliable and worthy "proprietary" preparations, some of which have become well-nigh standard, such legislation and its enforcement can only prove beneficial.

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MR. THEODORE D. BUHL, President of the well and widely known establishment of Parke, Davis & Co., died April 7, 1907. The following "Memorial" was adopted by the Board of Directors on behalf of the stockholders, executives, and employees:—

"Ten and a half years ago Theodore D. Buhl cast in his lot with this house. Throughout that period he has given us the benefit of his large experience, his sound judgment, his great power in the commercial world, his granite credit reared on an unwavering honesty. As President of the house he was the perfect type of integrity and fidelity to all the stockholders. His high sense of duty as a trustee pledged to administer

the property and guard the interests of others, was ever uppermost in his thoughts. The peculiar responsibilities and hazards of our work — our obligations as purveyors to the medical profession and to suffering humanity, were to him always a solemn appeal. The ultimate triumph of character in business was with him a conviction as deep and strong as instinct. The remote future and the distant prize concerned him more than the present gain.

"The strength which he gave this house and all the many enterprises in which he shared, signally exhibits what the world should realize especially at this hour — that rich men of unflinching honesty and sound judgment are of inestimable value to their communities. They are the employers of labor, the authors of new industries, the creators of new values, the pioneers who open up vast avenues of opportunity for their followers. As they succeed or fail, the comfort, the very bread, of thousands is assured or endangered. We hear much these days of unscrupulous, predaceous wealth, but what of the type of Theodore Buhl — what of the men who consider the trust of their fellowmen the best of their possessions, who have a horror of stock-jobbing methods, who never seek an unfair advantage, who never lend their names to a dubious enterprise?

"As a director Mr. Buhl was the soul of courtesy, kindness, and deference. As an employer he was considerate, thoughtful, mindful of the comfort, interests, and claims of his employees. To their grievances he always gave a patient and attentive ear. He encouraged the manly expression of honest opinion, and when it differed from his own his effort was to convince and persuade, not to invoke his authority or impose his will.

"On behalf of the stockholders, employees, and executives of Parke, Davis & Company we record this testimony to the lasting service rendered us by our lamented President. To the members of the bereaved family we offer our warm and heartfelt sympathy. May strength be theirs to bear their sorrow. May they find much comfort in the memory of a life rich in well-doing and in good repute."

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"PRACTICAL FEVER NURSING" is the title of Dr. E. C. Register's new book, which will soon be issued from the presses of the W. B. Saunders Co., of Philadelphia, Pa. Dr. Register is well known as the editor of the *Charlotte Medical Journal*, and as Professor of the Practice of Medicine in the North Carolina Medical College at Charlotte, N. C. From his varied and ripe experience in the profession the doctor is in a position to write authoritatively on the subject of "Fever Nursing."

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THE PHYSICIAN who employs Peacock's Bromides can depend upon best possible bromide results. This preparation never varies in strength

d eminent American and English analytical chemists have testified to the extra purity of the salts entering its composition. It has long been and will continue to be an important consideration to neurologists and general practitioners who wish to resort to a continued bromide treatment.

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COCA AND THE SALICYLATES.—J. H., Cincinnati, O., writes to the editor of the *Coca Leaf*: "Following a suggestion in the *Coca Leaf* as to the depurative action of Coca, I have used Vin Mariani to assist the elimination of uric acid, giving the wine either alone or alternately with the salicylates. I wish to express my appreciation of this remedy, which has opened a field of usefulness to me."

It is equally pleasant to record as to give kindly suggestions. Attention directed to the applications of Coca, based upon its physiological action, will indicate many uses for this remedy which will prove satisfying to both patient and physician.

The indescribably depressing action upon the stomach, often complained of by patients who take salicylates, may be obviated by using Vin Mariani as a vehicle. Fifteen or twenty grains of salicylate of soda in two ounces of Vin Mariani affords a palatable and efficient remedy in the elimination of uric acid. This dose may be found serviceable twice daily, after eating, and again at bed time if indicated.—*The Coca Leaf*, March, 1905.

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TO GUARD THE FUNCTIONS OF THE HEART is characteristic of the therapeutic action of Cactina Pellets. This conclusion reached by Myers more than fifteen years ago has been fully sustained by clinical experience. According to Myers, its power to increase the musculo-motor energy of the heart, elevating the arterial tension and increasing the height and force of the pulse wave, makes it a cardiac tonic stimulant of importance in the treatment of irregular and feeble heart action.

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FOR SALE.—Good country practice. Ten miles from Clarksville, Tenn. Highly populated section, fine school facilities, four churches, fine river bottoms and fertile hills. No competition in ten miles. Price, \$500 if taken at once; \$250 cash, balance in twelve months. Office fixtures and licenses included. Cause of selling: removal to city. Address, "N." of SOUTHERN PRACTITIONER, Nashville, Tenn.

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THE BEST HYPNOTIC.—A patient who would sleep but cannot sleep should be made to sleep. In the choice of a hypnotic the physician should always seek that one which not alone is most effective but which presents the fewest disadvantages in the way of after-effects. For years midia has been the standard hypnotic prepared at the command of the profession. Through all the time that it has been known it has never

failed in composition or efficiency. Its constituents have been of the purest, and in fact, Bromidia has been the standard by which similar preparations have been measured. That the medical profession have appreciated its worth and thorough reliability is well apparent, from the place it holds in the regard of every physician who appreciates stability and honesty.— *The International Journal of Surgery*.

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DALLAS, TEXAS, Oct. 31, 1906

*The Anasarcin Chemical Co., Winchester, Tenn.*—

I herein acknowledge receipt of Tablets sent me some time ago, and I am glad to say that I never used a medicine in dropsy resulting from heart trouble with more satisfactory results. I shall prescribe them hereafter in all similar affections.

Yours truly,

J. W. ANDERSON, M. D.

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THE PROBLEMS presented by a protracted or delayed convalescence are by no means the least of those that the busy physician has to meet.

When the storm-like fury of some acute disease has left a patient weak, debilitated, and susceptible to every passing wind, there is often urgent need for measures which will restore vitality, strength, and resistance.

In such cases Gray's Glycerine Tonic Compound is the proverbial friend in need, both to the doctor and to his patient; to the one because it enables him to accomplish what he hopes and desires—the rapid recovery of his patient; to the other because it means a shortened convalescence, and a more speedy, satisfactory recovery.

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SUMMER SESSION BY THE LECTURERS AND ASSISTANTS NEW ORLEANS POLYCLINIC.—This course is intended for recent graduates and other physicians who have been unable to attend earlier. It will last six weeks, and begins May 20, 1907. Teaching in sixteen branches, including the specialties, laboratory work, and cadaveric operations. Table of rates: Any single branch, six weeks, \$15; four weeks, \$12; any two or more branches, each, six weeks, \$12; four weeks, \$10; all branches, six weeks, \$100; four weeks, \$75. For further particulars write New Orleans Polyclinic, Liberty and Tulane Avenue, New Orleans, La.

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AN ANNUAL VISITOR.—We have just passed through our annual epidemic of la grippe, which, as usual, claimed its victims among all classes and conditions, mainly, however, among the classes where the resisting power was below par, or among sufferers from some chronic ailment. While the sequelæ and complications of this disease may assume almost any phase of acute inflammatory character, its primary effect is upon the nervous system. Therefore, we have no hesitancy in saying, no matter what the local inflammation may require as a medicine, by all means

the Antikamnia Tablets as a nerve sedative and to relieve the muscular aches always present. We have seen a violent cough of bronchitis treated on the general plan, with the cough as distressing at the end of twenty-four hours as at the beginning, promptly yield to six Antikamnia Tablets during an interval of six hours. La Grippe usually requires a double treatment, one directed to the influenza, and the other devoted to the complications present, be they of the respiratory organs or digestive tract. In all cases Antikamnia Tablets will be found to perform a prompt and successful part and purpose.—*Medical Reprints.*

ALTERIS CORDIA RHO represents one of our most reliable indigenous remedies for uterine ailments. Reports of its efficacy in numerous cases of menorrhoea, dysmenorrhoea, and menorrhagia affirm its value in the treatment of these cases.

"RHUS TOXICODENDRON," OR POISON OAK.—In a recent communication from Dr. J. M. Dunne, of Richmond, Ark., he makes the following statement, which we can most heartily indorse and commend:—

"I have experimented with bichloride of mercury in the treatment of inflammation and vesication produced by poison oak, and unhesitatingly say it will cure.

R Hydrarg. Bichlor. .... gr. xvj  
Aqua ..... Oij

Ms. S: Mop the parts often or apply on a soft cloth or absorbent cotton.

WE CALL THE ATTENTION OF OUR READERS to the advertisement of the Ineson-Pettet Co., Louisville, Ky., which will be found on advertising page 17 of this issue. This house was established fifty years ago, and enjoys a widespread reputation as manufacturers of high character. We do not hesitate to endorse their preparations as being all they claim for them.

## **Reviews and Book Notices.**

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles.—Edited by A. O. J. KELLY, A. M., M. D., of Philadelphia. 8vo, cloth, pp. 322. Price, \$2.00. Volume V., sixteenth series. J. B. Lippincott & Co., Publishers, Philadelphia, Pa., 1906.

The last volume of 1906 is unquestionably the best that has appeared, notwithstanding the great excellence of its pre-



ecessors. It contains five most excellent articles on Treatment, seven on Medicine, five on Surgery, three on Obstetrics and Gynecology, one on Laryngology, and one on Otology.

Among the various articles we can most heartily commend the one of forty pages on Electro-therapeutics, by J. H. W. Rhein, M. D., the two on Tuberculosis by Drs. William Porter and J. Edward Squire, that on Fractures of the Lower Extremity by Geo. G. Ross, M. D., and that on Placenta Previa and its Treatment by Dr. Joseph B. DeLee. The others, however, are all of unusual merit.

International Clinics give you "bed-side" instruction by some of the leading medical men of the world, and are the most practical and economical works that one can buy.

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**PARAFFIN IN SURGERY.**—A critical and clinical study by WM. H. LUCKETT, M. D., Attending Surgeon, Harlem Hospital; Surgeon to the Mt. Sinai Hospital Dispensary of New York, and FRANK I. HORNE, M. D., formerly Assistant Surgeon, Mt. Sinai Hospital Dispensary. 12mo, 38 illustrations, 118 pages. Cloth, \$2.00. Surgery Publishing Co., 92 William Street, New York City.

Full details are given as to the method of preparing the paraffin as well as the method and manner in which it should be injected. This book presents a wide field for the use of paraffin and a copy should be in every physician's library. It is printed upon heavy coated book paper and attractively bound in the best quality of heavy red cloth, stamped in gold.

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**PRACTICAL DIETETICS, with Reference to Diet in Disease.**—By ALIDA FRANCES PATTEE, Graduate Boston Normal School of Household Arts; Late Instructor in Dietetics, Bellevue Training School for Nurses, Bellevue Hospital, New York City; Special Lecturer at Bellevue, Mount Sinai, Hahnemann, and the Flower Hospital Training Schools for Nurses, New York City; St. Vincent de Paul Hospital, Brockville, Ontario, Canada. Fourth edition. 12mo, cloth, 300 pages. Price, \$1.00, net; by mail, \$1.10; C. O. D., \$1.25. A. F. Pattee, Publisher, 52 West 39th Street, New York.

This is a very excellent text-book for the physician, student, and nurse as a general guide for proper diet in disease. It contains the *diet lists* and what to *avoid* in various diseases; also the

per diet for infants and children as advised by leading physicians and hospitals of New York and Boston.

This book fulfills the requirements as to simplicity, brevity and exactness with reference to the dietetic treatment in disease and represents the course in dietetics as arranged for and used at Bellevue Hospital. It is highly commended by medical officers of the United States Army.

**TEXT-BOOK OF PSYCHIATRY.** A Psychological Study of Insanity for Practitioners and Students.—By DR. E. MENDEL, A. O., Professor in the University of Berlin. Authorized translation. Edited and enlarged by WILLIAM C. KRALSS, M. D., Buffalo, N. Y., President Board of Managers Buffalo State Hospital for Insane; Medical Superintendent Providence Retreat for Insane; Neurologist to Buffalo General, Erie County, German, Emergency Hospitals, etc.; Member of the American Neurological Association. Crown octavo, 311 pages, extra cloth. Price, \$2.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

For many years Professor Mendel has been in the front rank of German men of science, and his investigations in nervous and mental phenomena have added very important data to these complex subjects. This most excellent work, the result of a lifetime of observation and thirty years' experience in teaching, bears the stamp of thoroughness and scientific acumen, and may well be called "A Psychological Study of Insanity." The editor has translated the Prussian procedures relating to the insane, substituting the laws and commitment forms of the state of New York.

**ESSENTIALS OF CHEMISTRY AND TOXICOLOGY,** for the Use of Students in Medicine.—By R. A. WITTHAUS, A. M., M. D., Professor of Chemistry, Physics, and Toxicology in Cornell University. Thirteenth edition, revised by R. J. E. SCOTT, M. A., B. C. L., M. D., author of "State Board Examination Series." Cloth, 12mo. Price, \$1.00. Wm Wood & Co., Publishers, 1907.

This little work arranged in the form of questions and answers was originally designed to fill a vacancy previously left occupied by chemical writers, is now issued in its 13th edition, which was revised by Dr. Scott at the request of the author,

who gave him the benefit of his advice and experience, and to whom was submitted the manuscript for approval.

Although the book is but little larger than preceding editions, it contains much additional matter, and is fully in accord with the latest advances in chemistry and toxicology.

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AIDS TO DIAGNOSIS AND TREATMENT OF DISEASES OF CHILDREN.—By JOHN McCaw, M. D., R. U. I., L. R. C. P., Edin., Physician to the Belfast Hospital for Sick Children. Cloth, 12mo, pp. 383, third edition. Price, \$1.25. Wm. Wood & Co., Publishers, 51 Fifth Ave., New York, 1907.

In this third edition the author has enlarged its scope by the addition of much new matter and the careful revision of the old. The old matter has been carefully re-written and brought fully up to date, making this edition a decided advance on its predecessors. It will be found very helpful to the student and the busy practitioner who can not at all times spare the moments for examination of more comprehensive works. The author has availed himself of the suggestions and criticisms of the former editions, as well as by a thorough reference to the latest authorities.

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MODERN MEDICINE, by Eminent American and Foreign Authors.—Edited by WILLIAM OSLER, M. D. In seven octavo volumes of about 900 pages each; illustrated. Now in process of publication by Messrs. Lea Bros. & Co., of Philadelphia. Price per volume, cloth, \$6.00, net; leather, \$7.00, net; half Morocco, \$7.50, net.

Medicine has become cosmopolitan. Apart from minor differences the human race is the same everywhere, regardless of the arbitrary boundaries of geography. Modern means of communication have similarly made the whole world a single country in the diffusion of knowledge, investigations and discoveries being disseminated among advanced thinkers without regard to the former obstacles of time, distance, and difference of language. It is greatly for the benefit of the profession at large that the body of knowledge possessed by the leaders in the world of medicine should now be made available for all.

Considering this his greatest undertaking, Dr. Osler has be-

stowed on it the utmost care in its general plan, and has made a most careful selection of those invited to collaborate with him, and we can feel well assured that it will prove the most valuable contribution to the medical literature of the age.

Of the seven volumes to constitute the work, the first will soon be issued, and the others at intervals of about three months, long enough to enable the readers to master the contents of each volume as it appears, and to render the acquisition of the series easy from the financial point of view.

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### SPECIAL NOTICE

*The 17th Annual Re-Union of United Confederate Veterans will be held in Richmond, Va., May 30th, 31st, and June 1st, 2nd, and 3rd, prox., and the 10th Annual Meeting of the Association of Medical Officers of the Army and Navy of the Confederacy will be held at the same time and place. Dr. C. W. P. Brock, former Chief Surgeon of Kemper's Division, A. N. V., Chairman, with an able and energetic Committee of Arrangements consisting of former Medical Officers of the Confederate Service and younger members of the profession in the former Capital of the Confederacy earnestly hope that every surviving Confederate Medical Officer who possibly can will attend.*

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### Selections.

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EXTIRPATION OF BARTHOLIN'S CYSTS BY A NEW PROCESS.—Pozzi (*Annales de Gynecol. d'Obst.*) says all operators who are in the habit of removing cysts of Bartholin's gland are aware of the difficulties met with in getting such tumors out whole, and that it is not easy to remove every portion of the lining membrane when once such cysts are opened or burst during dissection. In order to facilitate their complete removal, Pozzi injects spermaceti into the cavity the evening before the operation. This solidifies after injection, and the tumor can then be removed as a solid mass.

The "Just as good" fiends are now pirating.—Insist on

**PHILLIPS'**

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EDITOR AND PROPRIETOR

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No. 6

### *Original Communications.*

#### PSEUDO MUSCULAR HYPERTROPHY.\*

BY J. R. RATHMELL, M. D., CHATTANOOGA, TENN.

PSEUDO Muscular Hypertrophy is a muscular disease of obscure origin, a variety of idiopathic atrophy. It is characterized by the loss of power with the increase in size and firmness of certain sets of muscles, especially the calves. It is a rare disease of childhood, probably of maternal origin, differing from progressive muscular atrophy in that the lower limbs are primarily affected with the atrophic changes, while the small muscles of the hand are not affected. There is an increase in the size of some muscles, not a genuine hypertrophy, only an increase in the interstitial fibrous tissue and fat. The exact pathological changes

\*Read at Annual Meeting of Tennessee State Medical Association, at Nashville, Tenn., April 1907.

have not been determined. Some observers believe that the nerve centers are involved, while others think the disease lies in the muscles with nerve changes being secondary thereto. Collins says the disease is a dystrophy developing until it reaches the stage of lipomatosis and myosclerosis. While the actual causation of this disease is not in our knowledge, yet such assemblies of physicians as this will help fill this hiatus and cast light upon the origin of a lesion of such prime importance. If it is preventable let us know it, and if curable let us learn the cure. The disease is of hereditary origin, perhaps from the maternal side. This precludes the idea of the disease having its origin in the nervous system, as it is thought nervous diseases are not transmitted through the ovum. Boys are the sufferers rather than girls, manifesting the disease in the time of early development and before the tenth year.

The pathology of this condition is a primary interstitial change in the muscles, showing an increase of the fibrous tissue, or of the fat cells which produces an apparent increase in the volume of the affected muscles. Some believe, however, that this change is the embryonic disproportionate distribution of the connective tissue laminae. The muscle fibers are secondarily affected by the interstitial change, and are apparently narrowed by the pressure. Atrophy, which is an especial feature of this myopathy, exists in the later stage of this condition in the lower extremities. While in the muscles of the trunk and upper extremities the atrophy is the first noticeable change. The atrophic condition seems to be caused by the thickening of the peremysium and the deposited fat cells, diminishing and finally cutting off nutritional supply of the involved muscles. Heredity is the only known etiological factor, and the theory of neural involvement has been generally abandoned.

While the pathology is uncertain it is pretty well settled that the hypertrophy is produced by the hyperplasia of adipose material in the midst of the muscle fiber. The lesions are confined to the muscles. Autopsy reveals yellow atrophy of the muscle fiber, which has been replaced by fat with no trace of muscles left; in some parts the fat lies between the atrophied muscle fibers with the increase of interstitial tissue.

The onset is gradual. If the observer is on the alert he will see some of the symptoms very early, even before the time the babe learns to walk. There is a clumsiness and instability that marks something wrong. The child stumbles readily and falls easily. In a little while a peculiar attitude and gait are noticeable. The hands spread out to keep from falling and the feet are placed apart with the heels drawn upward. When rising from a sitting posture, he turns himself over on his chest, rises on his hands and feet, then climbs up his thighs until the equilibrium of the body enables him to stand erect. This is all due to the weakness of the muscles in the knees, thighs, and hips. The child is compelled to learn how to get to an erect position. Gowers describes this method of rising in a very clear way. "If laid, for example," says Gowers, "on his back upon the floor and told to rise, he would first with great difficulty turn on his face, he would next get on his knees, his head being almost between his thighs; from this position he would gradually extend himself, so that he stands upon his feet and hands with all his limbs extended; finally he would extend the hip-joint by grasping the thigh with the hand and pushing up the body, as it were by the arm."

While the hypertrophy is progressing so also is atrophy. Hypertrophy is distributed about as follows: To the muscles of the calves, rarely to the thighs, infraspinatus, supraspinatus, and deltoid. Atrophy is seen about as follows: In the thighs, the deep muscles of the back, shoulders, scapulæ, pectorals, and latissimus dorsi. Later in the case the calves also atrophy, but the muscles of the face, forearm, and hand remain normal. As the result of the changes, lordosis, lateral curvature of the spine, extension of the feet, and other deformities occur. Spinal reflexes diminish until they are abolished, not even responding to the application of electricity.

To make diagnosis is not difficult when you note the muscular weakness, characteristic gait, and attitude. Prognosis is unfavorable, and as to treatment there is none that promises anything. The animal extracts, electricity, both faradic and galvanic currents, exercise, massage, and rest, all are faithfully tried but





with his muscles, but continued to grow in height and weight, but developed some muscles more than others, which his parents thought was evidence of increased strength. He always had good health so far as sleep and digestion were concerned. He complained of nothing whatever. He always had a good appetite, and was disposed to play with other children. It was soon observed that he could not get up off the floor like other children, but would turn himself over on his face and get upon his hands and knees and then forcing himself, as it were, in a peculiar way into an erect position. Up to that time his parents had not consulted any physician. The little fellow was brought into my office, and the symptoms of this disease were easily seen. The diagnosis was readily made and the parents informed as to the incurability of the condition. The muscles of the calves continued to enlarge, so that it appeared as though he had gained muscles. The father was encouraged to think he grew, not knowing of course the cause.

child to an Orthopedic Institute, where he remained six months under the treatment of electricity, exercising thereby to stop the disease if a cure was not possible. He is now no better to-day, but less capable of performing exercise incident to childhood than before. It is still impossible for him to go up stairs. His weight is now 110 lbs., his height five feet five inches, chest measure at rest twenty-four inches, respiration twenty-eight, heart beat 108. The circumference of the right calf is eleven and one half inches, of the left calf eleven and one half inches. The right biceps measure six inches, left biceps the same. He has a good appetite, sleeps well, walks without much difficulty, and complains of nothing at all except his inability to do as others do. He and his brother are bright, cheerful, wanting to play, and are not sensitive as to their condition. They eat well, sleep, and are obedient.

His brother Emmet is in his ninth year. He showed his first symptom after he was five years of age, so his disease has been in progress for only four years. Up to his fifth year he seemed to develop just like other children. He is a much harder looking child than his brother. His brother looks pale, while this one

looks ruddy and better built. Though he is three years younger, yet his weight is fifty-three and one half pounds, height five feet one inch, chest twenty-four inches, same as his brother, his respiration is twenty-four, heart beat 120. His right calf measures eleven inches, left calf the same. Right biceps seven inches, left biceps same. He has a greater difficulty already in climbing stairs than his brother, but can get up off of the floor a little more easily and quickly. He seems to have all the symptoms and other manifestations very much like his brother. One condition, however, has appeared in this case which I have never seen accompany this disease. It is chorea. During last summer the father, thinking his second son might be benefited in a sanatorium, sent him to one, and he was put under the treatment of electricity, massage, and rest. He remained there three months with no apparent benefit. After returning home about one month, he observed a peculiar jerking of the child's hands and body and movements of the face and eyes. He brought the child to my office, and I saw at once that he was suffering, in addition to the original disease, with that of chorea.

Writers say that this disease may appear in several members of the same family. The two cases that I have related occurred in the same family, and it has been my privilege to observe two cases in another family, which I will now speak of.

Twelve years ago Dr. G. M. Ellis of Chattanooga presented before the Chattanooga Medical Society Ed. R., five years of age, with well developed symptoms of this disease. He was unable to sit down upon the floor and lift himself to an erect position. The calves were markedly hypertrophied, as were the thighs and glutei muscles. He looked like a little giant, having a fine face, well shaped head, and showed a good intellect. Recently I saw this same case. He is now seventeen years old and has lost the use of the legs and lower part of the body from atrophy of the muscles. He is unable to lift his right arm and hands without the aid of the left hand. I learned that at the age of seven he ceased to walk, and has never attempted to walk since. He has good general health, appetite and digestion normal, while his body is atrophied. During these years his head has grown to the

size of an adult. He is capable of transacting business easily and quickly. He is ambitious to succeed in office work, as he now sits in a little office transacting business in an office chair under the supervision of the owner. All the functions of the body are natural. About one year ago he fell out of his roller cart and broke his right arm at the humerus. The bone united rapidly, and in about two months the process of healing was completed. The left latissimus dorsi muscle is greatly hypertrophied, yet the right one is atrophied. His disease has gradually progressed from the age of two years up to the present time, covering a period of fifteen years.

His sister Ella, now about eight years of age, showed symptoms of this disease when about one year of age. She was able to sit alone and crept early, but to-day as she sits in her little chair all doubled up it can be seen that the disease has been very pronounced in her body during these years, hypertrophy of the right calf is about the only remaining muscle enlarged, while all the other muscles have atrophied to the extent that there is scarcely anything left but bones covered with skin. She is absolutely helpless. She sits in a chair unable to move any part of her body except the arms. She has marked lateral curvature of the spine directed to the left. There is no pain and no distress, and above all not one of the cases that I have related to you shows the least sign of impatience, or the appreciation of the loss of power and ability to do like other children. They are all sweet-tempered patients and never complain. In each and every case the appetite is good, they sleep well, and the digestion is in no way impaired. I cannot obtain any history that might indicate a cause for the appearance of this disease in these families except in the last one. It is possible that the excessive use of alcohol and the pronounced dissipation and wretched handling of the family on the part of the father, might have had something to do with the development of the trouble. In the first family there is no history of nervous diseases or the excessive use of alcohol. With reference to the treatment, the mother had her son Ed R. under special treatment for this disease for a whole year with no benefit whatever. I do not know that she made any effort toward relieving her daughter.

## RESEARCHES IN RABIES.\*

BY WM. LITTERER, A. M., M. D., NASHVILLE, TENN.

THE word rabies is derived from the Latin verb *rabies*, meaning to rage. The disease has been known from the earliest antiquity, and has been mentioned in the writings of the oldest authorities upon matters connected with medicine. As early as the fourth century B. C. Aristotle describes it as follows: "That dogs suffer from madness which puts them in a state of fury, and all the animals that they bite when in this condition become also attacked by rabies." Virgil, Horace, Ovid, and Plutarch all make allusions to it in their works. The celebrated physician Aurelius Cornelius Celsus, in describing human rabies, was the first to employ the term hydrophobia, meaning dread of water. This term was used because during the convulsive period there is experienced much difficulty in swallowing liquids, and if an attempt be made to partake of water, painful spasms and contractions resulted, hence a reluctance to take fluids, which condition is responsible for the term hydrophobia. But this is by no means true as to all animals, nor is it true to a great degree with those animals which are popularly supposed to be always so affected. Many animals suffering from rabies will partake bountifully of water without any apparent discomfort. So it is not safe to contend that an animal is free from hydrophobia because he exhibits no apparent dread for water.

The problems of rabies have been most judiciously labored upon by many noted scientists. But no name stands out with such pre-eminence as that great pioneer in bacteriology, Louis Pasteur. Although unaware of the micro-organism concerned in inciting rabies, his genius in wise experiment enabled him to establish a method for artificial immunization against the disease which has proved most beneficent. It is a remarkable fact that while an immense amount of work has been done to improve or modify the preventive inoculation against hydrophobia as first

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\* Read at Annual Meeting of Tennessee State Medical Association, at Nashville, Tenn., April 1907.

given us by Pasteur, still his original treatment has not been very materially modified to this day, except perhaps we are using larger doses than formerly.

Another notable fact is that there has been comparatively very little scientific research on the etiology that has borne fruit until very recently. From 1885, which date refers to the practical application of the Pasteur treatment, up to 1900 we find scarcely any advance in the scientific knowledge of the disease. The treatment itself was not founded on nearly as scientific a basis as it is to-day. The probable reason for such a lack of investigation into its etiology was perhaps the more fruitful field in the study of bacteria with relation to many diseases that were of greater importance than hydrophobia. Again its successful treatment was possibly another reason for the lack of investigation for its causative factor.

It remained for Dr. A. Negri, an Italian investigator of the University of Pavia, in 1903 to describe certain bodies in the central nervous system, which he took to be protozoa and the cause of rabies. It is now generally conceded to be the true etiological factor of this disease. He describes them as usually round or oval bodies from one to twenty-five micron long, containing granules and somewhat vacuolated. They are found only in the central nervous system of animals dead of hydrophobia, and are never found in animals dying from other causes. These bodies which have now come to be universally known as "Negri bodies," seem to be more numerous and larger in certain areas of the brain than in others. They are most frequently found in the cytoplasm of the large nerve cells of the Hippocampus major, less often in the Purkinje cells of the cerebellum, the cerebral cortex, the medulla, etc. It is advisable to make examinations from several portions of the brain, should the Hippocampus major prove negative, for it has been shown by Negri that when animals were inoculated in the sciatic nerve that the bodies were found with difficulty in the Hippocampus major, abundantly in the spinal cord and ganglia. However, this is denied by some, but as a general rule an examination of the Hippocampus will suffice.

It has been stated by many that the Negri bodies are never found in the nuclei of the nerve cells, but this has not been my observations, as I have frequently seen them occupying not only the edge but its center, and in two instances have observed two bodies in a single nucleus, however, they are most frequently in the cytoplasm and vary greatly in number and size in each cell. It infrequently these bodies are found in the nerve branches, which of necessity causes an elongated appearance of the body in order to conform to its contour.

Negri's work was soon corroborated by many Italian observers, and later followed by numerous investigators in various countries, which have confirmed in nearly every detail Negri's first observations. The "bodies" have been found by these authors in all varieties of animals which are susceptible to hydrophobia, for example, cats, dogs, mice, rabbits, Guinea pigs, cattle, horses, and human beings.

Countless controls were made by the different observers. They examined the central nervous system of various animals dying from all kinds of infections, strychnine poisoning, tetanus toxin, and the like, and in no instance were there found bodies resembling those observed in rabies.

Bertarelli reviews the Italian researches on rabies that have been done in Italy. He states that in more than a thousand tests no Negri bodies were never found in animals that were free from rabies, as determined by inoculation of rabbits. On the other hand they were always found in infected animals with only three exceptions, and in these only a part of the nervous system had been examined. These constant findings suggest that examination of the Hippocampus major — their chosen site — will decide if the case is one of rabies in case of positive findings, while negative findings almost inevitably exclude the disease. It is wise, however, to make a supplementary test by inoculation of rabbits.

*The Significance of the Negri Bodies.*— All authors up to 1905 with two exceptions agree with Negri in considering them protozoa and the cause of rabies. The two dissenting observers, Remlinger and Schuder, reason from the fact that the virus can be

filtered through an exceedingly fine filter practically impervious to ordinary bacteria, a proof that these bodies are too large to pass such a filter and therefore are not the cause of hydrophobia. On the other hand Bertarelli showed that the residue after filtration was also virulent. These observations strengthen the fact that it is of protozoal origin, since the very large forms will not pass through, and the small forms are not retained by the average filter.

McNeal has shown with the Trypanosomes that besides the large forms, there are forms tiny enough to pass a Berkefeld.

*Diagnosis of Rabies.*—Possibly most of the work that has been done thus far on the Negri bodies has been to establish a reliable and rapid method of diagnosis in animals suspected of being rabid. Heretofore we resorted to the findings of the "Rabic tubercle of Babes," which is a proliferation of the endothelial cells in the capsule of the ganglion cells, and also for an accumulation of leucocytes in the perivascular lymph spaces about the blood-vessels and finally of chromatolysis of the ganglion cells. These points cannot be said to be absolutely diagnostic, for a similar change has sometimes been noticed as a result of other infectious diseases. However, it is of great value as a confirmatory sign. The staining of the Negri bodies has for the most part been undertaken to demonstrate them in tissues, and there are many methods that are satisfactory for this line of procedure, but in all tissue work it takes much time to prepare the specimen. Bohne describes the shortest method so far published for examination of sections. The whole process lasts only three hours, and the author states that it is very satisfactory. Quite recently workers have attempted the use of the "smear method." That is by making a smear of the brain and then staining it. This has proved to be wonderfully successful. Especially since the whole process is much simplified; no embedding or sectioning is required, and the entire process may be completed within one-half hour after removal of the nerve tissue from the animal. The smear method will probably largely replace the other methods for rapid diagnostic work. Williams and Lowden recommend two stains in particular for this method, viz., the eosin-methylene

blue of Mallory, and the Giemsa. Frothingham has strongly recommended the smear preparation of fresh brain tissue fixed in Zenker's fluid, or dried in the air and stained with Unna's methylene blue followed by eosin. Many other stains have been employed by a number of workers with very good results.

*Original Work.*—Within the past several months there has been reported quite a number of alleged rabid dogs in and about Nashville. A few of these—five in number—were sent to me for examination in order to determine if possible their ailment. Three out of this number proved by animal inoculation and the Negri test to be suffering from hydrophobia, one from strychnine poisoning, while the other was not determined, as only the head was sent, hence no chemical examination could be made of the stomach contents. However, the tests proved negative for hydrophobia. Having the available material to work with from experimental inoculation of dogs and Guinea pigs, I conceived the idea of a new stain as a means of rapid diagnosis. Realizing that it is of paramount importance that an accurate and rapid diagnosis be made which has advantages over the sub-dural inoculation of rabbits, in that much time is saved for the patient in beginning treatment, it is less expensive and it relieves the patient of much suspense in awaiting the result of an animal inoculation.

After having experimented with many stains and following carefully the technique of staining the Negri bodies as given by many authors, I have come to the conclusion that the many so-called good stains are not so good after all, except by repeated trials, and even then they often fail. My uniformly best results have been obtained by the following stain which I have prepared. It should be freshly made. The formula is as follows: Löffler's methylene blue, 2 c. c.; saturated alcoholic solution rose aniline violet, 1 gtt.; saturated alcoholic solution neutral fuchsin, 1 gtt.; distilled water, 10 c. c.

The technique for staining the bodies is as follows: (1) Make an exceedingly thin smear of the brain substance, preferably from the hippocampus major. The thin smear is made by placing a small portion of brain substance about the size of a pin head on a clear cover glass; then lay another cover glass on this



and by means of a glass rod exert pressure so as to spread it out uniformly, then slide them apart horizontally. After the smears are made the next step is (2) Immerse in wood alcohol for one and one-half minutes. (3) Wash. (4) Put on the above stain for one-half minute, using heat to intensify stain. (5) Wash and examine for the Negri bodies.

I have been working with the above stain in order to make a permanent one, and have fairly succeeded but hope to improve upon it. The formula is as follows: Löffler's methylene blue, 25 parts; methylene alcohol, 75 parts; saturated alcoholic solution rose aniline violet, 1 part; saturated alcoholic solution neutral fuchsin, 1 part; distilled water, 25 parts.

This solution has kept for several months without any apparent change in its staining qualities. The technique is quite simple but does not give as good results as the first stain, as there are certain modifications that are necessary which will be determined later on. The technique is as follows: (1) Make thin brain smears; (2) stain with above for one minute; (3) add a few drops of water to the stain and allow to remain on for two minutes; (4) wash and examine for Negri bodies.

The whole staining process takes less than three minutes, producing just as good results as other methods which are longer and hence have a more complicated technique. I have obtained good results from the following very simple stain, recommended by von Gieson, Williams, and Lowden, viz: methylene blue (Löffler's), 2 c. c.; distilled water, 10 c. c.; and saturated alcoholic solution of basic fuchsin, gt. 3.

By the use of such a stain a striking picture is produced. The cytoplasm of the nerve cells is stained a light pink, the nuclei a light blue, nucleoli a dark blue, the red blood cells a light yellow, while the Negri bodies stain a dark red. A well-stained specimen will show in these "bodies" a few very small dark blue dots. They are called chromatoid granules. The method in preparing the very thin smears, so essential for good results, seems to destroy for the most part the cytoplasm of the nerve cells. So in examining by this method, the Negri bodies will be found scattered throughout the entire smear, mostly

extra-cellular, as the nerve cells have been squashed by pressure in preparing, which causes the extrusion of the bodies.

*Summary.*—In summing up it may be stated: (1) That it is the consensus of opinion that the Negri bodies are the true etiological factor of rabies. (2) That they are living organisms belonging to the class of protozoa. (3) When found in smears or sections of the central nervous system are specific for this disease. (4) These "bodies" have never been found in other diseases than rabies. (5) That the smear method of examining for the Negri bodies offers us a more rapid and reliable method of diagnosing hydrophobia than any other method yet published.

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### REPORT OF A CASE OF UNUNITED FRACTURE OF THE SHAFT OF THE HUMERUS AND PARALYSIS OF THE MUSCULO-SPIRAL NERVE.\*

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BY DUNCAN EVE, M. D., OF NASHVILLE, TENN.

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Mr. R. S. K., of Bowling Green, Ky., 31 years of age, has always been stout and healthy; not having had any sickness of any kind since childhood, was knocked down on the 29th of March, 1905, and, as he claims, his right arm was run over by a heavy vehicle, producing a fracture of the shaft of the humerus in the middle third. As we found the fracture simple and quite oblique in its line, we are disposed to believe it was produced from an indirect force, and not from the direct force of a wheel passing over the member, as he thinks, in which event the fracture would be apt to have been crushed or comminuted. The injury was, we understood, treated by immobilization in the ordinary way, when after due time it was found the bone had failed to unite; after using friction or rubbing the ends together, counter irritants over the seat of fracture, etc., it was again immobilized by a splint, all to no advantage in the accomplishment of union, and on the 24th of April, 1906, an operation was made, consisting of an approximation of the oblique ends and holding them with

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a silver wire suture, the arm being this the third time immobilized in plaster of Paris for seven weeks.

Soon after this operation, musculo-spiral paralysis developed. We found upon examination the patient had wrist-drop and was unable to extend the fingers or to supinate the forearm. There was paralysis of the triceps and complete loss of sensation in the lower half of the outer and anterior aspect of the arm, and in the middle of the back of the forearm, as far as the wrist; furthermore, the bone had failed again to unite and there was the greatest possible mobility noticed in every effort to move the arm.

On March 2 last, at our Infirmary, the patient being prepared, and in the presence of Dr. W. R. Francis of Bowling Green, Ky., and with the assistance of my brother, an incision was made in the middle of the external aspect of the arm, the fragments well freed so that an inspection could be made of all the parts. We found the silver wire used to encircle the oblique ends of the bone was also around, with strangulating pressure, the musculo-spiral nerve, which was partially displaced out of its groove. This explained the paralysis.

The oblique ends of the upper and lower fragments were excised and approximated. The apposition was held by a device that Tafel & Co. made for us, which consisted of a silver plate or cleat one and three fourths of an inch long, three fourths of an inch wide, and one twenty-fourth of an inch thick, contoured so as to fit the round surface of the bone, and with two perforations at each end to receive half-inch silver screws, which, after drilling smaller openings in the bone than the size of the screws, were driven in as a nail, and thus the freshened ends of the bone secured firmly. Our attention was next given to the nerve, and having shortened the bone, we determined to excise the nerve, which was almost severed by the wire suture. We removed at least an inch, and by an end-to-end fine silk mattress suture united the same, placing it back as near as possible in its groove, which had first to be relieved of fibrous material that filled up part of its extent. Drainage was provided for, the external wound closed with interrupted sutures, the wound dressed, and the arm and forearm placed on an internal right-angled splint, so as to thoroughly immobilize the whole superior extremity.

## THE SOUTHERN PRACTITIONER.

As a rule, the humerus is more subject to non-union than any other long bone. Treves believes this is due to the entanglement of muscle between the fragments, lack of fixation of the shoulder joint, and imperfect elbow support. Hamilton believes it is due to the fact that the elbow soon becomes fixed at a right angle so that any movement of the forearm moves the seat of fracture and not the elbow. We therefore always immobilize the forearm in an internal right-angled splint as well as the arm, and would like to state that we have a record of never having had but one case of a united fracture of the humerus where we had charge of the case from the first.

We are glad to report, though only five and a half weeks from the time of the operation, that the prospect is good for a perfect union of the bone, not having had a drop of suppuration in the wound, and further that the musculo-spiral paralysis shows every indication of relief; it is true, that while sensation has returned, motion is not yet complete, but improving every day, being too early for normal return. We can feel the development of callus at the approximated ends and have already begun active movement of the elbow, which will be increased at every dressing, and expect to dismiss the patient in about ten days or two weeks' time as cured.

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## GYNECOLOGY.

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BY E. S. MCKEE, M. D., OF CINCINNATI, OHIO.

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*The Surgical Cure of Prolapsus of the Vagina and Uterus.*—A. D. Duhrssen (*Gynak. Rundschau*). The cure of prolapse by operative measures implies: 1, Removal of excessive vaginal tissue; 2, construction of a firm pelvic floor; 3, restoration to the normal position and size of the uterus; 4, proper treatment of the cystocele.

Colporrhaphy fulfils the first indication. Colpoperineorrhaphy accomplishes the second end. The author modifies the Heger operation by outlining a five-cornered area of denudation and making sure that the perineal muscles are properly restored by the

sutures. The size of the uterus is diminished when necessary by an amputation of the portio or of the entire cervix. The position of the uterus is restored by a vagino-fixation operation as advocated by the author since 1893.

The treatment of the cystocele is the most important feature of the operation. On the anterior vaginal wall an inverted *T* incision permits of a thorough dissection of bladder and ureters from their connection with the vaginal and uterine walls. The peritoneal cavity is opened and the adnexa explored or treated surgically. Adhesions of the uterus are broken up. The bladder having been crowded high up above the uterine fundus, sutures are passed so as to include both edges of vaginal mucosa and peritoneum in the line of incision and the exposed anterior uterine wall. The result of this is that the bladder is permanently dislocated upward and its descent prevented by the uterus attached to the vaginal incision. In cases of young women in whom the probability of future pregnancy exists, the peritoneal wound is closed independently and only one silk suture attaches the uterus to the vaginal wound.

As the result of ten years' experience with this method of procedure, the author, while admitting that he frequently is obliged to remove the uterus in advanced cases, expresses great satisfaction with it.

*Migration of a Gauze Sponge Left after Laparotomy into the Bladder.*—Dr. W. Stroeckel (*Zent. f. Gynak.*) There are 200 cases on record in which, after laparotomy, sponges, towels, scissors, clamps, forceps, etc., were unintentionally left in the peritoneal cavity. Although such foreign bodies may become encapsulated (when aseptic) or escape outward or into the intestine and bladder, the latter is the most rare of all.

The patient, a girl of 24, had been laparotomized in July, 1906, for diseased ovaries. A sinus was left which communicated with the bladder. Cystoscopic examination revealed a foreign mass projecting into the bladder interior. With forceps the body was extracted and proved to be a gauze-sponge.

Inquiry discovered the circumstances that at the time of the first operation the bladder was injured and repaired, with later urinary fistula which healed spontaneously.

The writer thinks that the possibility of overlooking sponges, ., may happen to the best operators.

*Transplantation of Human Ovaries.*—H. Cramer (*Munch. d. Woch.*) says that experiments on transplantation of the ovaries in the lower animals have given some encouragement in this line in the human race.

In guinea pigs, in which the ovaries of the same animal had been transplanted, the ovaries became attached and performed their functions without atrophy for some months. In two cases Knauer's, after resection of the adnexa, a piece of normal ovary was implanted in the tube. Pregnancy occurred in these cases after some months, showing that the ovarian substance had, to all appearances, undertaken normal growth. Other authors have transplanted ovaries into other portions of the pelvic organs, as the uterus and broad ligament, without success.

The author transplanted the ovaries from women suffering from osteomalacia, but in whom the ovaries were in normal condition, into patients in whom there was atrophy of the ovaries. The ovaries were kept in warm normal salt solution until they were ready to be implanted. In first case there was atrophy of the uterus and ovaries in a woman 23 years of age, with amenorrhea, for a year or more. The two patients were operated on simultaneously. The atrophied ovary was split and the normal ovary of the osteomalic patient placed in the cleft and sewed in, so that it was enclosed by the cortical substance of the atrophied ovary. Healing was perfect. The patient menstruated normally twice, with tenderness of the breasts and colostrum in the glands. Eight weeks after operation the uterus had grown from two and one half centimeters to seven centimeters in length. The next menstrual period was absent and one month later an abortion took place at about six weeks. In the second case the transplanted ovary underwent atrophy and disappeared.

*Sciatica Cured by Correction of Uterine Displacement.*—Ofsgeld (*Deutch. Med. Woch.*) reports the case of a woman of 42 years, who had been married 15 years without becoming pregnant. For the last three years she had suffered from very severe pains in the regions supplied by the right sciatic nerve. She had

been treated by competent physicians and neurologists without effect, and an operative stretching of the nerve was contemplated. Offengeld discovered a retroflected uterus, shortened the round ligaments and cured the sciatica completely within a few days. The beginning atrophy of the muscles disappeared and the woman was able to return to her work. Incidentally she was cured of her sterility and gave birth to her first child a year later.

*Spontaneous Expulsion of the Carcinomatous Uterus after Cauterization with Chloride of Zinc.*—Dr. A. Blau (*Zent. f. Gynak.*)

The author in reporting this extraordinary case, warns against the dangerously penetrating cauterizing power of chloride of zinc.

A woman of 64 was suffering from pyometra associated with carcinoma of the cervix and uterine interior. After dilating the cervix and permitting the purulent retained discharges to escape a rubber drainage tube was left inside for several days. A radical operation was projected, but in view of the foul, persisting discharge a strip of gauze saturated with 30 per cent. chloride of zinc was introduced into the uterine interior and removed after fourteen days. After this the uterine cavity was washed out every second day with hydrogen peroxid. On the eighth day a sac was found in the vagina having the shape of the uterus. Under the microscope it proved to be the interior of the uterus, including the musculosa. In other words, the entire carcinomatous uterus and cervix (possibly down to the peritoneal covering) became spontaneously detached and were expelled. The patient left the hospital well with parametric exudates which were either inflammatory or malignant.

*Notes of a Case of Ovarian Cystoma in which Thyroid Tissue Occurred.*—Dr. J. H. Swanton (*Med. Press*). The case is more interesting from a pathological rather than a clinical standpoint, as only nine cases of this variety of tumor have been described. The author is inclined to submit his case as one of teratoma.

In general appearance the tumor was tri-lobed, the lobes consisting of three large cysts, the largest measuring 3 inches in both its diameters and presented extremely thin walls. By transmitted light yellow tissue was seen in patches on the inner surface of

the wall. At the confluence of the three cysts there was found a solid mass of tissue, which in section presented a multilocular cystic appearance, the loculi being filled with solid colloid material.

The tissue was found to have a thyroid structure consisting of loculi lined by low-lying cubical epithelium and containing colloid material in which were ghost-cells and spaces occupied originally by fat crystals.

"The microscopical section shows a smooth outer capsule undergoing hyaline degeneration; inside the ovarian stroma is somewhat broken up with clear spaces between as if edematous. Numerous groups of deeply stained nuclei are seen irregularly arranged, some of the cysts being more surrounded than others. Then comes a reticulated structure, and beyond this several cysts with low cubical epithelium. The central portion is stained with eosin, and in some cysts is separated from the wall. In the central portion may be seen empty spaces, some oval, while others are irregular."

When a teratoma of thyroid tissue exists in the ovary at the time of diminishing activity at the thyroid gland, a compensating hyperplasia may take place, which subsequently develops into either an innocent or malignant growth.

*The Treatment of Ovarian Prolapse by Shortening the Ovarian Ligament.*—Dr. V. Bonney (*The Lancet*).

1. Primary ovarian prolapse uncomplicated by retroversion or disease of the appendages results from abnormal elongation of the ovarian and ovario-pelvic ligaments. A stitch of a silk thread catches the uterus posteriorly and is passed along the ovarian ligament in a "gathering stitch" up to the ovary, when both ends are tied and the ovary is raised and attached to the fundus of the uterus at a greater or lesser distance from the cornua. The other ovary is treated in the same manner.

2. Ovarian prolapse caused by, or complicated with, chronic disease of the ovary or tube to which fixed retroversion may or may not be added. "In these cases the operation of salpingo-oophorectomy is the one which we should most seek to avoid." The author strongly favors conservative operations on the ovaries, and an attempt should be made to prevent the return of these



organs to the diseased peritoneal bed from which they have been separated. In these cases the ovaries or portions of ovaries are brought up and attached under the uterine cornua by the operation described. Ventro-fixation is now added. The author thinks that he thus secures the following results: The removal of the cause of the disorder — the inflamed tubes; the conservation of the ovaries in a position removed from the diseased area in which therefore they stand the best chance of ultimate recovery; the avoidance of the possibility of post-operative retroversion.

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### POWDER BURN OF FACE.

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BY E. KUDER, M. D., COFFEYVILLE, KAN.

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ABOUT a year ago I was called in a hurry to relieve the awful suffering of Carl Rucker, of this city, ten years old, who, when playing with other boys exploded about two ounces of coarse black shooting powder in a little earth mound and not being quick enough to turn away got the most of the discharge into his face; even the conjunctivæ of both eyes were blackened, and from the burn and subsequent inflammation shut tight; one of the ears also got burned very badly.

To extract the powder from the skin I have in years gone by applied a thick layer of castile soap made into a sort of dough, and as I had to deal here with the inflammation and pain besides, I scraped a cake of shaving soap, mixed it thoroughly with Anti-phlogistine, and applied it about one half inch thick all over the face and ear, leaving a hole for the eyes, nostrils, and mouth. About one half hour later the little patient, a very sensible child, rested very comfortably free from pain and slept a few hours soundly. About twenty-four hours later I removed the whole mask from the boy's face, and to my great delight and surprise the application had drawn out every kernel of the powder. The inflammation had been greatly reduced, pain was all gone, and the face appeared almost natural again with the exception of the sclera of both eyes, which I treated with a solution of cocaine adrenalin.

Another remarkable circumstance is the fact that the boy at the same time got entirely rid of his freckles, not a trace of the latter could be detected.

For about a week the face got anointed with cold cream twice daily, and being well was discharged as cured.

### RHEUMATISM: ACUTE AND SUBACUTE.

BY Q. C. SMITH, M. D., SAN DIEGO, CAL.

To LEAVE extraordinary cases and conditions and special complications out of the following suggestions, we venture to advise, for adults, as follows:—

The skilful application of heat, pain-killing liniments, electricity, with massage, are more or less in order, in almost every case. The following constitutional remedies will often prove very effective: To relieve the *pains*:  $\mathcal{R}$  Pulv. gum guaiacum, spirin, aa gr. 100. Ms. ft. 20 powders. S. One powder every three hours when awake until pains are greatly mitigated, then three times a day just after meals until pains are entirely relieved.

Keep the bowels moving freely once or twice every twenty-four hours. The following is very effective:  $\mathcal{R}$  Euonymin, gr. 2; chionanthin, cascadin, aa gr. 6; leptandrin, juglandin, aloin, aa gr. 3. Mix and make 24 pills. S. One or two pills once or twice a day to move bowels.

As a constitutional digestive tonic, to use until the patient is strong, sound, and well, the following will usually serve well:  $\mathcal{R}$  Mur. hydrastis, cimicifugin, xanthoxylin, euonymin, aa gr. . . . . Mix and make 24 pills. S. One pill three times a day soon after meals.

ALMOST A SPECIFIC FOR ASTHMA.—The following is almost a specific both in relief and as a final cure in asthma:—

$\mathcal{R}$  Tinct. of gelsemium . . . . . oz. i  
Tinct. of lobelia . . . . . oz. i  
Potassium bromide . . . . . oz. ss

M. Sig.: Dose, twenty drops in water every three hours.—  
*The Medical Summary.*

## *Abstracts.*

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### THE USE OF PHOSPHORUS AND ITS COMPOUNDS.

C. D. F. PHILLIPS, M. D., London, late Lecturer on Materia Medica at Westminster Hospital and Examiner in Aberdeen University, writing on "The Physiological Actions and Therapeutic Uses of Phosphorus and Some of Its Compounds," says that the glycerophosphates are now extensively employed and appear to have a distinct sphere of usefulness. Discovered in the yolk of egg in 1846, they were but little known till 1893, when Robin drew attention to the large amount of partly oxidized phosphorus in the form of glycerophosphoric acid eliminated in the urine of some neurasthenics. He administered compounds of this acid and found that they increase the general metabolism of both organic and inorganic matter, principally the latter, as shown by the augmented excretion of urea, chlorides, and sulphates, though not of uric acid or phosphates. They favor the current assimilation of albuminoid matters and moderate denutrition of the nervous system, aiding its reconstruction by remaining in the body. They have a wide range of employment,—chronic gout, diabetes, phthisis, Bright's and even Addison's disease with nutritive decay, to improve the vital powers rather than to directly combat such maladies; similarly, any nervous breakdown, as in the aged or after acute illness; chlorosis, rachitis; chronic dyspepsia, especially with lessened acidity (after appropriate treatment); and neuralgia, ataxia, sciatica, spermatorrhea, and neurasthenia generally when marked by depression; headache and impaired mental and muscular strength. Robin said insomnia, palpitation, and phenomena of excitement may be exaggerated (this is not Phillips' experience) and that the medication is not suitable in conditions of azoturia or when organic oxidations are above normal, or in mental disease or general paralysis. They are beneficial in muscular atrophy from various causes and in diphtheritic paralysis.

Harris pointed out that *a priori* it is probable that the glycerophosphates act as foods to the nervous system. They favor as-

milation and metabolism. The best results are obtained in nervous exhaustion from overwork, in which they really have good effect. Professor Wild of Manchester uses glycerophosphates of soda for weakness following influenza and for nervous exhaustion from overwork, and Dreschfield finds it useful in many functional diseases.—*Abstracted from the Medical Brief, December, 1906.*

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## Selected Articles

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### RESUME OF FEDERAL QUARANTINE WORK.\*

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Y S. B. GRUBBS, M. D., ST. LOUIS, MO., PASSED ASSISTANT SURGEON  
U. S. PUBLIC HEALTH AND MARINE HOSPITAL SERVICE.

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THE subject of quarantine work in this country can be naturally divided into local and national. The former, under the control of the State and municipal boards of health, has to deal chiefly with the exanthemata and endemic contagious diseases, while the national quarantine endeavors to exclude the more serious, or at least the more feared, diseases that may come in from without, or having come in, to prevent their spread from one state to the other.

The national service stands ready also to undertake the work of suppressing epidemics when called upon by the individual States, and so epidemic work of all kinds is properly a part of its work. I shall not enter into the question of States' rights in sanitary matters, except to say that it complicates the work as well as the understanding of the situation. Neither shall I enter into any academic discussions, but shall give rather a simple account based largely on personal experience.

The quarantine regulations of the United States recognize as quarantinable the following diseases: Cholera, yellow fever, smallpox, typhus fever, leprosy, and plague.

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\* Read before the St. Louis Medical Society, March 16, 1907.

Previous to 1893, the quarantine restrictions and formalities of our seaports were very confusing, as each state, having absolute control, was lax or stringent according to the dictates of the shipping interests on one hand, or the popular fear of contagion on the other. The threatened invasion of cholera in that year brought forth the quarantine act, which is the foundation upon which our present regulations are based. In brief, this law provides:—

1. That U. S. consuls shall issue bills of health to vessels bound for the United States.
2. That medical officers shall be detailed to assist the consuls in foreign ports, when the sanitary conditions warrant.
3. That collectors of customs shall require a certificate or pratique from the quarantine officer of the port before the vessels can be admitted to entry.
4. That the Surgeon-General, U. S. Marine-Hospital Service, shall make regulations up to which standard local or state quarantine boards must act. It also allows vessels to be sent to a national quarantine station, if the local station is not prepared, and provides for the acceptance of the certificate of the national quarantine officer by all collectors of customs. It provides for the purchase of local quarantine stations by the United States, when the State may wish to surrender the same, and authorizes the President to prohibit absolutely the entrance of certain persons or things in time of great danger.

It will be seen that this law, by allowing the port regulations to be made by the surgeon-general, is elastic. Restrictions can be made rigid at any moment to guard against impending danger, and relaxed when the danger has passed.

As I say, this law was passed to meet the cholera danger that threatened in 1893. As soon as passed, Marine-Hospital officers were sent to all the principal ports of Europe and there inaugurated a system of inspection, disinfection, and detention, while at home regulations were issued that required a long period of observation after the arrival of a suspected vessel. You remember several vessels arrived at United States ports with cholera aboard, both in 1892 and 1893, and that cases were reported that

year in New York and Jersey City, but that their number was much reduced is certain, when we note, for instance, that after our regulations were put in force at Naples, out of seven immigrant vessels that sailed, four bound for South American ports, taking no precautions, had each over fifty cases of cholera, while the three bound for New York had no sickness whatever.

Since 1893 no cholera or plague has actually threatened our Atlantic coast, but in 1899 and 1900 the steady advance of the latter from the Orient to Mediterranean ports, with its eruption in London and Glasgow, caused the President to send twelve medical officers to European ports to study the situation and to be on the ground in case energetic action should become necessary.

Plague and cholera are constantly threatening our Pacific sea coast and island possessions, so that the most careful supervision of all commerce from Asiatic countries must at all times be maintained, both at the ports of departure and at home, but in this, the eastern half of the United States, our greatest interest is centered in yellow fever, which, although enormously simplified by Reed's brilliant demonstration of Finlay's mosquito theory, still remains, both from a sanitary and a commercial standpoint, one of the great problems of the South and the country at large.

The government maintains on our coasts over forty quarantine stations, which, if you will remember the law referred to, must be either where proper stations have not been provided by the States, or where local stations have been turned over to federal control; so there are in addition to those of the government, a large number of local stations, a few well equipped, but the majority for inspection purposes only.

Let us visit one of the larger Southern stations in summer, ignoring the fact that in quarantine season these stations are *incommunicado*, and visitors perforce are not welcome. We shall find it on an isolated point or island, on or near the line that vessels must take to enter their ports. It has a good harbor and an anchorage marked by yellow buoys, in which quarantined vessels only are allowed. If it is a refuge station we

shall find it on an island entirely isolated and several miles from shore, for to these stations the most dangerous vessels are sent. The equipment of the station consists of quarters for officers and men, an administration building, usually two hospitals, barracks for detained persons, a large disinfecting plant on a barge or a pier in deep water, and boarding and transfer boats of various sizes. The standard disinfecting plant consists of a large boiler, two large Kinyoun-Francis steam chambers, each with a vacuum jet and formaldehyde attachment; two steam pumps and tanks, one for bichloride solution and one for water; one double sulphur furnace with blower and several lengths of six inch sulphur hose; some formaldehyde generators; two or three hundred Dutch ovens, and half as many galvanized iron wash tubs. The supplies kept on hand are sulphur, wood alcohol, and formaldehyde, although the latter is very little used at present.

A vessel from a foreign port must have a discharge of pratique from the quarantine officer before she can enter at the Custom House, so when a vessel is reported by the look-out, it is not necessary to intercept her, as many suppose, but to note if the yellow flag (letter Q) is flying from the foremast. If so, the boarding boat is ordered out, and we are ready to be alongside promptly as soon as the anchor has been dropped inside the quarantine anchorage. The quarantine officer, in boarding, is met by the captain at the rail, and greetings having been exchanged, the captain is asked from what port he hails, if he has had any sickness en route, and any other questions that may be pertinent; after this the ship's papers, especially the bills of health, are examined and the sanitary data compared with the tables published in the Public Health Reports. A quarantine declaration is then drawn up from the facts at hand or supplied by the captain, and this the captain signs. The papers being satisfactory, all hands are mustered on deck and each person is examined and checked off. The entire vessel is then examined carefully from forecastle to poop, sleeping and working quarters being inspected especially for mosquitoes. If the vessel is from a port where yellow fever is known or suspected to prevail, all compartments are closed and sulphur is burned in every inclosed space, sufficient to kill animal

## THE SOUTHERN PRACTITIONER.

Usually from 2 to 3 per cent. of sulphur dioxide is evolved exposure is maintained for twelve hours. After this the vessel lies in quarantine for five days, and all hands are inspected

the vessel is not to be quarantined, by reason of being from a healthy tropical port or because she carries no passengers, has an immune crew, and has complied with the prescribed requirements at an infected port, or because she was fumigated before arrival by a Marine Hospital officer stationed there, the inspection is even more careful. The search for mosquitoes and larvæ is systematically made, and the examination of each person includes taking temperature and pulse. But even with all care, the responsibility in some cases rests heavily on the quarantine officer.

Suppose it is a steamer, for instance, five days from Barbadoes, in a healthy territory, but where no yellow fever has been reported for several years. Everybody is apparently well, but on examination one man is found to have a temperature of  $38^{\circ}$  C., and on questioning confesses he has been chilly and has had a headache for twenty-four hours. You can probably imagine the difficulties of the situation. On the one hand, a steamer with expenses from \$100 to several hundred dollars a day, must be held at least until a positive diagnosis can be made, because it is possible that a case of yellow fever has slipped into Barbadoes, and this is some of the danger of infection; one chance in a thousand, perhaps; but on the other hand the people cannot be asked to take that chance, however much the captain may fume and argue. If an arriving vessel has yellow fever or other infection aboard, or the disease appears on a vessel lying in quarantine, the patient is as a rule removed to the contagious hospital of the station before disinfection of the vessel. If she has a nonquarantinable disease, the patient goes to the noncontagious hospital. After the removal of patients the procedure is as before, a complete disinfection and a new start being made for each new case of infectious disease that appears.

Before 1903, when the present regulations based on transmission of yellow fever by mosquitoes were adopted, the work of disinfection was much greater for every one. The vessel had to



be warped alongside the pier or disinfecting barge; all bedding and clothing had to be passed out and sterilized by steam; all decks, cabins, and ballast had to be wetted down with bichloride solution, and sulphur dioxide pumped into the hold for hours, a 10 per cent. atmosphere being aimed at. This required much work, a large and reliable disinfecting crew, and a perfect system to overcome the natural resistance of the ship's company, who resent having their chests and drawers overhauled, and will try to circumvent the disinfecting squad in every possible way.

To-day our equipment for yellow fever disinfection of vessels consists of galvanized iron wash tubs, roll sulphur, wood alcohol, and pots in which to burn sulphur. Dutch ovens being wide and shallow, with three legs and a convenient bail, make the best sulphur pots. The wash tubs are to hold a couple of inches of water in which the sulphur pot is placed in case it must be put on a wooden floor. It is convenient to keep these Dutch ovens on hand, filled each with twenty to thirty pounds of sulphur, and while the vessel and crew are being inspected have the attendants tow alongside a large yawl boat into which everything necessary has been loaded. From the vessel's tonnage the quarantine officer computes the amount of sulphur to be burned, and gives the proper directions to the head of the disinfecting squad, which gets everything ready by placing the pots in the hold, engine room, cabins, and every inclosed space, and by closing all port holes and ventilators. After a final inspection, two men, one with a jug of wood alcohol and the other with a box of matches, move quickly from one pot to the other; the first pouring one or two ounces of wood alcohol on the sulphur, the other dropping a lighted match on it. To light thus twenty-five or thirty sulphur pots in the deep hold of a vessel and get out without being more or less asphyxiated takes some coolness and training, but the whole operation, as will be seen, is very simple compared with our old attempts to sterilize a vessel and her contents. After the pots are lighted, all doors and hatchways are sealed with a piece of paper bearing some stamp that cannot be duplicated, and we are sure everything will remain closed as long as we wish.

The physician's life on a quarantine station has many disad-

antages and some hardships, which are recognized in the Public Health and Marine-Hospital Service by limiting the tour of duty to three years. The stations are in isolated positions, and a policy of practically complete nonintercourse with the outside world is maintained during the summer months, a policy necessitated formerly by the popular fear of infection by fomites and now continued largely as a matter of custom. During epidemics, coastwise vessels from infected ports must be fumigated and undergo disinfection before they can enter noninfected ports, so the work of quarantines, and especially of the refuge stations, is enormously increased at these times. It may be a distance of only five or ten miles coastwise that the craft may wish to go, but five days after disinfection must be spent in quarantine just the same.

Gulf Quarantine Station, of which I had charge from 1902 to 1905, is on Ship Island, in the Gulf of Mexico, ten miles from Biloxi, Miss. The island is of dazzling white sand; is seven miles long, from half a mile to a hundred yards wide, and is about twelve feet above mean tide. One can here easily imagine himself to be an Alexander Selkirk, for he is both master of all he surveys, and is shut off almost entirely from that social and professional intercourse which is one's pleasure and stimulus to work. Especially is this true in things strictly medical, and I do not believe you who have always enjoyed the advantages of hospitals, clinics, and of societies such as this one, can appreciate the deadening influence of isolation. But the quarantine officer has some compensations; he can shape his plant and perfect a system all his own; his responsibility is great and his authority absolute. He lives an out-door life, much of the time on the water; his quarters are commodious and well furnished, while such sports as fishing, hunting, and sailing are at his very door.

Quarantine measures for yellow fever are instituted on land only when the disease has actually appeared, and there the government is allowed to take measures only to prevent the introduction of the disease from one State to the other, or to take more comprehensive steps when requested by the State authorities; that the government work is subject to the approval of every State and every locality, each having its own ideas and its own fears.

So it must be understood that epidemic work, especially in the South, is often done under the greatest difficulties. I shall be able here to do no more than outline the approved measures, taking first those for localities actually infected, based on the campaign of Surgeon J. H. White in New Orleans, and then those applicable to the surrounding country.

Our fundamental laws upon which all measures must now be based, are:—

1. Yellow fever is transmitted only by the *Stegomyia calopus*.\*
2. A yellow fever patient can infect the mosquitoes only in the first three days of his sickness.
3. The mosquito must have been infected at least twelve days before he can transmit the infection.

Based on these laws, the indications are:—

1. To locate all cases of the disease as early as possible, and protect them from the stegomyia.
2. To destroy infected stegomyiæ.
3. To prevent stegomyiæ from breeding. To this may be added the very important corollary: Instruct the public in mosquito transmission, in order to gain their confidence and co-operation.

To begin work systematically, headquarters for the commanding officer are located in some convenient building, with ample telephone and telegraph facilities, and his staff is organized to wit: Executive division, in charge of correspondence, orders, and all accounts; division of disbursements; division of statistics; purveying division, and division of train inspection. An emergency hospital is established by screening some suitable building so as to be absolutely mosquito proof. All patients that consent and can be moved without danger will be brought here. One officer is detailed to each city ward, and each establishes headquarters in his own territory. He first must have exact knowledge of every house and person in his ward, and to this end he, with his inspectors, gets up a sanitary survey, which, when com-

\* The name *Stegomyia calopus*, recently proposed by Prof. R. Blanchard, instead of *Stegomyia fasciata*, has been adopted by the service. See Public Health Reports, Vol. XXII, No. 14, April 5, -1907.

leted, gives all these sanitary data, one blank being made out for each house, and all properly filed and indexed. At the same time working squads are organized for salting, oiling, and screening, for fumigating and for routine inspecting.

To prevent the *stegomyia* from breeding, an understanding of its life, history, and habits is necessary. The *stegomyia* is a domestic mosquito, breeding about houses, and is seldom found far from human habitation. In cisterns, rain water barrels, sagging gutters, tin cans, anywhere about a house where water can collect, the female will deposit eggs. It is the female alone that bites animals and those old enough to be dangerous usually bite at night. These breeding places must then be abolished, screened, or oiled, and for this purpose the oiling and screening squads proceed methodically, emptying all useless water, screening, with cheese cloth, the reservoirs that contain drinking water, and oiling cess pools, ditches, ponds, and similar places.

Inspectors must be tactful and conscientious, and their work must be methodical and well done. They must record all data called for on the proper blanks, but must above all things promptly locate every case of fever. Rich and poor alike resent to a certain extent the inspection and reporting of their sick. The ignorant fear the hospitals, the educated fear the notoriety, and all fear the quarantine and the separation. Therefore, every house, in fact every person, must be watched, but in a way that the surveillance may not be irksome. The mosquito is infected by the patient in the first three days only, and it is absolutely essential to find and screen the patient during this time.

The treatment of the sick is never undertaken by the Public Health officers, but is left to the family physician, who in turn must not interfere with the patient's surroundings, especially the screening and fumigating. The family physician can be and usually is of great assistance in reporting all cases of fever at the earliest moment. When a case of fever is discovered it must be considered suspicious and treated accordingly. The patient is either removed under a bar to the emergency hospital, or he is kept under a bar while the fumigating squad fumigates and screens the room of the house where he lives. He is then moved into

this room, and the rest of the house and the surrounding houses are carefully fumigated to kill any *stegomyia* that may have bitten him. This is done with sulphur, pyrethrum powder, or camphor phenol, according to the kind of the building.

Promptness in locating the cases, tact in overcoming the fears and prejudice of the ignorant, and system, are the essentials for success. The details of the system used so successfully in 1905, I have been able to indicate only, but those interested should read the report of Surgeon White and others in the last *Annual Report of the Surgeon-General, Public Health and Marine-Hospital Service*, and the article by Assistant Surgeon Rucker, in the December (1906) *Journal of the Association of Military Surgeons*.

Outside of the infected points, the indications are to prevent the extension of the disease without too much impeding travel and business, and to prevent or allay panic.

Under the first head we must remember that a quarantine that prohibits intercourse will be evaded, and that a degree of stringency giving the greatest amount of protection with the least amount of obstruction is the most efficient. Many systems could be adopted, but that most approved is to establish a sanitary station a few miles out on every railroad, river, or other line of communication leading from the infected point, and to run "shuttle trains" to these stations, where all freight, mail, and passengers are transferred to fresh trains with fresh crews.

Passengers that may possibly have been exposed to infection must remain in detention camps, for a time sufficient to cover the incubation period of the disease, or be sent through in screened coaches to noninfectible points willing to receive them. Besides, all trains in infectible territory must be carefully inspected, to the end that by a complicated system of certificates the fact that each passenger has not been exposed to infection can be assured, be he from north or south. The details are too complicated, even under ideal conditions, to be entered into here, and yet the work must be carried out, often amid the greatest confusion caused by local boards working at cross purposes, or amid panics that are unreasoning and immovable.

Undoubtedly this train inspection work can be much simpli-

fied and to a large extent abolished as soon as the people at large realize that the stegomyia does not travel either by wing or by cars, and that a mosquito bar renders a case of yellow fever absolutely harmless. In this, I hope, the cities of the North and all non-infectible points North or South will show their humanity and their knowledge. A city barring out frightened and destitute refugees when science has absolutely demonstrated that yellow fever could not spread there, even if a case was introduced from without, is a spectacle out of harmony with this liberal minded and progressive age.

To give you an idea of the atmosphere in which epidemic work must be done, I can do no better than quote from the report of Surgeon Young, who had charge of the train inspection service in 1897 and 1905:—

“Persons living outside of infectible territories have not the slightest conception of the effect of the announcement that yellow fever has appeared in some place within such territory. People outside this zone read of the quarantines which result with but a faint understanding of their true significance. They hear occasionally of some absurdity or some harm caused by the enforcement of silly or cruel quarantine rules, and laugh or shudder, as the case may be — a little heartier in the one instance and with more repulsion in the other — because they feel that they would not be so stampeded into such foolish or criminal acts. But they have no justification for this.

“The psychology of panic is not limited in its workings by geographical lines, as witness the ridiculous action of the Detroit authorities in quarantining against Cincinnati because of the arrival at the latter place of a few fever-stricken refugees, and the panic that struck a small Indiana community when a woman from Missouri fell sick of malarial fever. Indeed, as a broad generalization, it may be said that, within infectible limits, the panic is in inverse proportion to the distance from the center of infection.

“On the 21st came the announcement that yellow fever had appeared at New Orleans. Instantly local quarantines sprang into existence in every direction, interrupting traffic, suspending

building operations, because neither men nor material could be brought in, closing factories because they could not handle their output, separating husbands and fathers from wives and families, closing summer schools and institutions, stopping the assemblage of the volunteers for the annual encampment, cancelling weddings and preventing funerals. In short, reaching into every personal and business relation, and bringing the industrial and social life of the state almost to a standstill."

We must remember that this report refers to 1905, when mosquito transmission was an established fact, and the whole problem was much simpler than ever before, and yet it had to be a campaign of education and persuasion. At first many flew back to the doctrines of their childhood. "Canton would not take anything unfumigated, one town refused a barrel of carbolic acid, and West Point and Durant refused telegraph poles," but before the summer was over the people were listening and believing.

The eradication of yellow fever from New Orleans and other places in 1905, and the raising of land quarantines some weeks before the probability of frost, was the second great demonstration of the mosquito transmission of yellow fever that must forever silence reasonable doubters.

The problem when Surgeon White took charge of the situation was immensely difficult, owing to the general unsanitary condition of New Orleans, the large number of cases of fever, and the spirit of the people that causes them to resent interference or dictation. However, the seemingly impossible was done. All factions were united and the work was so skilfully planned and so brilliantly executed that we may all well be proud of the result, and class it as one of the great victories of peace.—*St. Louis Medical Review.*

## *Editorial.*

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### ANNUAL COMMENCEMENT EXERCISES OF THE MEDICAL AND DENTAL DEPARTMENTS OF THE UNIVERSITY OF TENNESSEE.

FORTY-THREE new physicians and four new dentists were launched on their careers from the University of Tennessee commencement, which was held at Watkin's Hall on the evening of Wednesday, May 1. The exercises opened with prayer by Rev. J. E. C. Atkins, were very appropriate, and an audience that taxed the seating capacity of the hall witnessed the ceremonies.

The charge to the graduates of the medical department was delivered by Prof. W. E. McCampbell, M. D., of the faculty. He congratulated the graduates upon the work already performed and touched upon the responsibilities that would come to them in the years that were to follow in the practice of their chosen profession. He admonished the graduates not to allow the seeming small field that might be theirs for a time by the selection of some small country village in which to pursue the fortunes of the young physician, cause them to diminish their efforts of study, stating that some of the grandest and brainiest men and some of the greatest facts that had ever been given to the medical world had emanated from the country towns, where the advantages of the city's hospitals were not to be found; that improved methods of treating disease had been discovered out of sheer necessity; that much depended upon the personal effort of the young physician and not so much upon environment for the next ten years. "You are now ready to study the complex processes of diseases as found at the bedside and in the sick room," said Dr. McCampbell. "Medicine has ever been and will always continue to be a progressive science," he continued, and he urged upon the graduates the necessity of keeping abreast of the times in the matter of new discoveries for the treatment of disease and upon all important discussions that have to do with the profession all over the world.

The charge to the graduates of the dental department was delivered by Dr. Joseph T. Meadors, dean of the dental department. In concluding he admonished the graduates to "hew close to the line of true ethics, and be eligible; if not, be no professional man at all."

The address to the graduating classes was delivered by Hon. L. D. Padgett of Columbia. "This is a splendid age in which we live," said he, "a magnificent civilization and a fine country, an age of progress and development, and everywhere are signs of this growth in material things which contribute to health, wealth, and happiness of a prosperous people.

"Just as marvelous has been the development in intellectual things as



in material matters, and in the material world after all the growth has been an object lesson of some man's thought. The profession of medicine has made perhaps the most remarkable progress of any of the learned professions. The men at the head of the profession have not been content to stay in the old ruts, but have been diligent in the search for facts, both interesting and beneficial; the moral line has been more tightly drawn as between virtue and vice.

"The professional man of to-day must enter the homes of this land as a gentleman, as the sanctity of the homes of yours in your confidential relations and this closes the doors to frauds and invites men who are civil, courteous, gentlemanly, and earnest. Let not your diploma be an anchor; if so, it is a curse. Rather let it be a boat that carries you to higher and better achievement."

Prof. R. L. Jones, Superintendent of Public Instruction and ex-officio member of the Board of Trustees, conferred degrees on the following:—

*Graduates of the Medical Department.*—Archie Byrd, Tenn.; L. J. Breaux, La.; H. B. Brown, Tenn.; E. E. Craig, Ark.; S. A. Casey, Mo.; H. E. Christenberry, Tenn.; T. J. Crice, Ky.; Paul Crumpler, N. C.; L. A. Donoho, Tenn.; H. M. Dismukes, Ala.; W. C. Eggleston, Tenn.; D. D. Howser, Tenn.; F. D. Haston, Tenn.; S. W. Hopkins, Tenn.; J. C. Hutchinson, Tenn.; O. W. Hill, Tenn.; H. C. Hesson, Tenn.; J. B. Haskins, Tenn.; Frederick Horne, Miss.; E. W. Jenkins, Tenn.; T. L. James, Ala.; E. M. Loyd, Tenn.; Clay Lauderdale, Miss.; J. S. Mackey, Ala.; Silas Murray, Tenn.; D. C. LaVerne, Cal.; F. A. Martin, Tenn.; J. A. Price, Tenn.; E. E. Reisman, Tenn.; Frederick Roberts, Tenn.; C. M. Roberts, Ky.; H. P. Spencer, Tenn.; C. E. Spoon, N. C.; J. R. Tarpley, Tenn.; Lycurgus Thomas, Ky.; O. S. Tenley, Texas; A. B. Thach, Tenn.; C. A. Treadway, Tenn.; C. C. Vinsant, Tenn.; W. P. Wheeler, Tenn.; B. H. Woodard, Tenn.; J. H. Thomason, Ala.

*Graduates of the Dental Department.*—R. S. Blue, Miss.; B. R. Ezzell, Texas; R. M. Waldroup, N. C.; Theo. L. Webre, La.

In the Medical Department, the first honor was awarded to Dr. Frederick Horne of Mississippi; the second to Dr. Frederic Roberts, of Nashville, Tenn., and the third to Dr. E. E. Reisman of Tennessee.

In the Dental Department the honors were awarded in the following order to Dr. R. S. Blue of Miss.; Dr. R. M. Waldroup, of N. C.; C. O. Rhea, of Tenn.; and Wm. S. Meador of Tenn., the two latter being members of the Junior and Freshman classes.

### THIRTY-SECOND ANNUAL COMMENCEMENT OF VANDERBILT UNIVERSITY, MEDICAL DEPARTMENT.

On the evening of Wednesday, May 1, the annual commencement exercises of Vanderbilt University Medical Department were held in the College Auditorium, corner of 5th Ave. South and Elm St., a very large and

appreciative audience being present, Chancellor J. H. Kirkland presiding. The exercises were opened with prayer by Rev. G. B. Winton.

Prof. Richard A. Barr, M. D., delivered the faculty charge in an able and eloquent manner. He contended that the public is especially weak in its judgment of doctors in their professional capacity and that the young men who were then beginning their career should strive to attain that medium between excessive modesty and extreme egotism, and place medicine in the real sunlight where it would be understood and appreciated by all. Personal jealousy was universal, but should be avoided, as should also mercenary motives in the practice of medicine. He entered a protest against the use of the word "knife," so generally referred to in connection with surgery. As a matter of fact, he explained, the knife was seldom used and the term was an injustice to the profession. In conclusion Dr. Barr said that it was an occasion of some sadness for him, though he knew it was one of rejoicing for the graduates, whom he wished god-speed.

Dr. Winton then entertained the audience by a chaste, masterly, and eloquent address. He said in part that he had always been accustomed to swallow what the doctors had given him, and he was glad of the opportunity to even matters up with them. He announced that his talk would be a "decapitated sermon," something frequently given under the head of an address. He chose for his subject "Idealism versus Materialism," taking the position that doctors are very apt to become materialists. They grow familiar with all parts of the human anatomy and yet find no soul in the bodies of their patients. For this reason they were inclined to be satisfied with their material knowledge and care little for the welfare of the soul, that thing which they could not see nor understand.

Idealism was the theory which holds that back of the materialistic manifestation is the ideal which prompted it. This view Dr. Winton approved and warned the graduates against the other opinion, or the tendency to doubt anything beyond the material. The physician's calling should not be looked upon as so much "graft." Independence was a fine thing in itself and success also was to be strived for, but these things were not all, the doctor should make his profession his standard and not a means to an end, but an end in itself. It should be loved for its own sake. Doctors were ministers to suffering humanity, and satisfaction should not be felt on account of the brilliant and successful operation so much as happiness at the relief of the sufferer. By sacrificing themselves for others they would realize the highest ideal in life. "You should above all be gentlemen," concluded Dr. Winton, with special emphasis upon the first half of the word, "for to you delicate women will expose the profoundest and most sacred of life's secrets and the hopes of the families which you attend will cling about you. They will hang upon your every word, look, and accent, therefore, it is very necessary that you should exercise the greatest care at all times."

The Chancellor then conferred the degree of Doctor of Medicine on the following gentlemen: A. F. Abernathy, C. F. Anderson, H. T. Ballantine, H. N. Barnett, Hugh Barr, R. E. Bartlett, Jr., Walpole Brewer, O. N. Bryan, A. J. Bryant, N. D. Buie, Harvey Carter, Wm. E. Chadwick, W. E. Cooper, C. D. Conn, C. E. Evans, J. J. Fabien, H. C. Grizzard, J. V. Henderson, C. B. Hollobaugh, Eugene Jackson, F. T. James, J. B. Lackey, B. S. Lester, D. C. Maddox, Richard L. Mathews, M. A. Meacham, H. D. Miller, C. H. McKnight, W. C. McRee, D. R. Pickens, R. S. Porter, J. W. Reed, C. A. Rogers, E. G. Sandlin, W. G. Saunders, H. L. Scales, F. R. Singleton, W. B. Spain, Jr., C. E. Spencer, J. H. Stephenson, C. O. Williams, H. B. Williams, Guy Wright.

The founder's medal was awarded to W. E. Cooper of Tennessee.

Interneships were awarded as follows: D. R. Pickens, Tenn., City Hospital; W. E. Cooper, Tenn., St. Thomas Hospital; H. L. Scales, Miss., Butterworth Hospital, Grand Rapids, Mich.; J. H. Stephenson, Texas, Providence Hospital, Waco, Texas; B. S. Lester, Ky., St. Vincent Hospital, Birmingham, Ala.

Scholarships were won by: First year class to L. R. Wood, Ala.; second year class to W. T. Briggs, Tenn.; third year class to M. B. Murfree, Tenn.

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CLEAN FEET TO HELP CURE SORE EYES.—Q. C. Smith, M. D., of San Diego, Cal., writes as follows: "For fifty years we have been observing that to carefully wash the feet and ankles in pleasantly cool water every night just before going to bed, would materially aid in curing conjunctivitis, acute, subacute, or chronic."

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DR. JNO. A. BODINE, of New York City, reports in the June number (special one dollar issue) of the *Annals of Surgery* his personal experience of over four hundred operations for radical cure of inguinal hernia with local cocain analgesia. Since the first operation of this series, no case of inguinal hernia has been operated upon under any other kind or method of analgesia. Consequently the experiences embrace nearly all variations of the simple hernial protrusion, and nearly, if not all, the different types of patients. It is the conclusion of this paper that local analgesia is entirely adequate for the radical cure of inguinal hernia.

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FOR SALE.—Good country practice. Ten miles from Clarksville, Tenn. Densely populated section, fine school facilities, four churches, fine river bottoms and fertile hills. No competition in ten miles. Price, \$500 if taken at once; \$250 cash, balance in twelve months. Office fixtures and medicines included. Cause of selling: removal to city. Address, "N," care of SOUTHERN PRACTITIONER, Nashville, Tenn.

## THE SOUTHERN PRACTITIONER.

**LACTONE, P. D. & Co's. BUTTERMILK TABLETS.**—The tablets represent compressed form, a pure culture of lactic acid bacilli, the *Bacterium li Lactici* of the bacteriologists (*Milchsauerbacillus*, Hueppe), which, when added to pure milk, under certain conditions as described below, is of value in the extemporaneous preparation of buttermilk, or, more truly speaking, of a modification of milk which, although containing all butter-fat and presenting the full nutritive value of the milk in palatable form, looks and tastes like dairyman's buttermilk of the highest quality.

Natural buttermilk represents only those constituents of milk which separated with the cream, less most of the butter-fat, yet in composition it resembles milk quite closely, as the following analyses show:—

	Buttermilk.	Whole Milk.
Water .....	90.62	86.88
Casein and other proteids.....	3.78	4.92
Fat .....	1.25	3.50
Milk Sugar .....	3.38	4.00
Lactic Acid .....	.32	....
Ash .....	.65	.70
	100.00	100.00

That a good quality of sour milk, buttermilk, matzoon, kefir, etc., is of great nutritive value and very easy to digest, is a fact well known to the medical profession. Nearly every large hospital has some special department of its own for the preparation of such acid milk, which is commonly used by convalescents and invalids. In warm countries, where facilities for keeping milk sweet are poor, it is often the custom to use milk only when it is sour, and among those who consume this kind of milk there is a noticeable absence of diarrheal diseases.

A number of physicians have lately reported good results from feeding children on buttermilk exclusively. Many patients suffering from such diseases as acute diarrhea, gastritis, subnutrition due to old catarrhal gastritis and myasthenia gastrica, gastric disturbances during pregnancy, intestinal diseases during the hot season (especially of children), marasmus, chronic indigestion, the anemia and subnutrition of the aged, have been cured on buttermilk for quite long periods of time with the greatest success. Metchnikoff claims that sclerosis and other infirmities of old age may be long postponed by the free use of sour milk or buttermilk, the whole effect of which is explained by its power to destroy bacteria which, left unmolested, may become potent factors in the causation of auto-intoxication.

Infant foods must fulfil a dual purpose. First, they must contain those elements in proper proportion that keep up growth and repair tissue waste; and, they must possess those elements that maintain the body tempera-

ture. In cows' milk, suitably prepared, we have the nearest approach to this ideal food of anything obtainable by the masses, who must have something that is cheap and everywhere available. To repair tissue waste and provide for growth and development, we have in milk, proteids; and to maintain the body temperature, the saccharine and fatty constituents.

One of the difficulties attending the use of cows' milk for infants is the tendency of the casein to curdle in large lumps. In well prepared buttermilk the casein is already curdled in very fine flakes and in the best possible condition to be acted on by the digestive juices.

*Directions for Using Lactone.*—Take a quart of fresh, rich milk, the fresher it is the better; place this in a suitable clean pitcher, jar, or bottle, and add about one third of a quart of water, the exact amount needed depending upon the richness of the milk—the richer the milk, the more water can be used. Then add a pinch of salt and crumble one of these tablets into the milk, shaking or stirring well; cover with a cloth or piece of paper and leave at the ordinary room temperature, 70° to 80° F. In about twelve to twenty-four hours, usually, depending for the most part upon the temperature, it will be ready for use. Stir the coagulated milk thoroughly with a spoon. It should be smooth and not lumpy. It should then be placed in the ice box and is ready for use as needed. If the milk has had a preservative added to it, such as formalin (formaldehyde), it will not sour properly; thus, in a measure, Lactone becomes an "indicator" of the presence of a preservative in milk.

With Lactone tablets, given a good quality of pure milk, one is able at all times to provide unlimited quantities of buttermilk of even quality and of great food value. This latter point is of importance, since the full food value of the milk is available, whereas in ordinary buttermilk nearly all of the butter-fat has been abstracted, resulting in just that much diminution of the caloric value of the food.

The superiority of a preparation made with these tablets over ordinary buttermilk is apparent from the following considerations:—

1. The cream is left in the milk, enhancing its nutritive value.
2. In the ordinary method of making butter the milk is allowed to sour from what accidental bacteria may get into it. Usually the lactic acid germs predominate, but along with these there is always a greater or less number of putrefactive bacteria, so that the resulting buttermilk is a mixture of true lactic acid, milk, and putrefactive products. By the use of the tablets and fresh milk the chances of contamination are very materially reduced.
3. Buttermilk made with Lactone retains its palatability, the normal fresh buttermilk flavor, longer than ordinary buttermilk.

Lactone tablets are not absolutely permanent. In fact, if kept under ordinary drug store conditions, they should be used within three months

from the time they are sent out from the laboratory, since *they contain live micro-organisms, and of course are subject to the same influences which affect the keeping of cultures of bacteria in general.* Buttermilk made with fresh tablets, however, if kept at a temperature of about 40° F., remains good indefinitely. You can keep such buttermilk in the refrigerator for eight weeks at a time without any apparent change in looks or taste. When quantities of buttermilk are desired for immediate use for any purpose whatever, it may be put in glass-stoppered pint bottles and stored in a cool place, about 40° F., and used as needed from time to time. The probabilities are that the amount of lactic acid developed in milk by the use of these tablets will be sufficient to prohibit the growth of putrefactive organisms; but it should be borne in mind that an even, low temperature, not varying more than two to four degrees from 40° F., is required to produce the best results. The average household refrigerator, as a rule, varies considerably in temperature, and such variation may have an effect upon the buttermilk.

Lactone tablets are marketed in bottles of 25, practically a month's allowance for an individual customer.

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**A FEW WORDS ON THE USE AND PREPARATION OF BEEF FOR THE SICK.—**There is a vast difference of opinion among physicians, not only as to the special kind of food which shall be administered to patients, but also as to the method of preparing it, and in no instance is this more noticeable than in the use of beef. This product is recognized generally as the most nutritious of all animal foods, and no doubt more largely resorted to where a nutrient stimulant is desired. Some physicians recommend making beef-tea or bouillon from fresh beef to be purchased at the local butcher shop. The common way of preparing is to boil the meat four or five hours, strain, and serve from this stock. Another method is to express the juice from the beef, add boiling water, and serve. Either operation means the expenditure of considerable time, to say nothing of the trouble and annoyance, and when the work is finished there is no guaranty of purity and wholesomeness, because, as we understand the new food law, it is not necessary that animals should be U. S. inspected unless the meat is intended for interstate shipment. Local slaughter-houses, doing no interstate business, are not under U. S. control; therefore, meats emanating from many such houses do not carry the government guaranty of freshness, purity, and freedom from disease.

Our attention has been called to Armour's Soluble Beef, which we note Messrs. Armour & Company of Chicago claim to be prime lean beef, preligested to an albumose. It contains no preservative whatever, and will keep for an indefinite period in any climate. A 2-oz. jar, retailing at not over fifty cents, will make forty cups of tea or bouillon. This product

may also be employed in varying the diet by using in combination with eggs, cereals, etc.

We all know that every animal slaughtered in Armour & Company's different plants must be closely inspected by experienced and trained U. S. inspectors, in addition to which the manufacture of all products is under direct government supervision, consequently there is not the remotest opportunity for their sending out a single ounce of Soluble Beef which is not pure and wholesome. These safeguards and precautions make this product one of par excellence for administration to the convalescent or invalid, or wherever a nutrient and stimulant is indicated. We understand Armour & Company are willing to send samples upon request.

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THE TREATMENT OF INOPERABLE MALIGNANT TUMORS—CARCINOMA—is the subject of an article by Prof. J. M. G. Carter, which he read before the Illinois State Medical Society, and printed in a recent number of the *Illinois State Medical Journal*. He says in part, Since nuclein contains phosphorus, it is a tonic, and besides its germicidal properties, it has other therapeutic value. That it is a rational agent in the treatment of various dyscrasæ is attested by clinical experience. For a number of years the writer has used nuclein with such success as to lead him to hold it in high regard as an agent for the treatment of malignant growths and other low dyscrasæ. The particular preparation was Reed & Carnrick's Protoneuclein. The dose was twenty-four grains a day.

The bromide of gold and arsenic is another remedy, which, in my hands, has seemed to prove useful in the treatment of inoperable carcinoma, but I have always used it in connection with other agents. I have had more confidence in the nuclein than in the bromide, chiefly perhaps because I had two cures in which I did not use the bromide, while I have had none where nuclein was not used. I have come to consider the administration of nuclein and bromide of arsenic and gold together as a most rational and valuable treatment in cases of inoperable carcinoma. It is the combination upon which I depend rather than on either agent singly.

I have used this method of treatment in many cases with apparent benefit, but I am able to report only five cases in which the treatment was carried out as prescribed from the time the patient came under my observation until the termination of the case. One of the cases died; the other four recovered.

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EVERY PHYSICIAN KNOWS.—Every physician knows full well the advantages to be derived from the use of Antikamnia in very many diseases, but a number of them are still lacking a knowledge of the fact that Antikamnia, in combination with various remedies, has a peculiarly happy



effect; particularly is this the case when combined with salol. Salol is a most valuable remedy in many affections; and its usefulness seems to be enhanced by combining it with Antikamnia. The rheumatoid conditions so often seen in various manifestations are wonderfully relieved by the use of this combination. After fevers, inflammations, etc., there frequently remain various painful and annoying conditions which may continue, namely: the severe headaches which occur after meningitis, a "stitch in the side" following pleurisy, the precordial pain of pericarditis and the painful stiffness of the joints which remain after a rheumatic attack—all these conditions are relieved by this combination called "Antikamnia & Salol Tablets," containing 2 1-2 grains each of Antikamnia and of salol and the dose of which is one or two every two or three hours. They are also recommended highly in the treatment of cases of both acute and chronic cystitis. The pain and burning is relieved to a marked degree. Salol neutralizes the uric acid and clears up the urine. This remedy is a reliable one in the treatment of diarrhea, entero colitis, dysentery, etc. In dysentery, where there are bloody, slimy discharges, with tormina and tenesmus, a good dose of sulphate of magnesia, followed by two Antikamnia & Salol Tablets every three hours will give results that are gratifying.

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**TYREE'S ANTISEPTIC POWDER.**—A quantitative, qualitative, bacteriological, and clinical analysis of this preparation is embodied in a most interesting little brochure, which will be mailed physicians by the manufacturer, J. S. Tyree, at Washington, D. C., free of cost upon application. We firmly believe that it is not so much what it contains that gives it its marked value, as the way in which the ingredients are combined.

For leucorrhea, gonorrhea, vaginitis, pruritus, and ulcerated conditions of the mucous membrane, one to two teaspoonfuls to a pint of water three or four times a day. For scrofulous, syphilitic, and varicose ulcers, apply the powder full strength or dilute with boracic acid. As an ointment, use from one to three drachms to one ounce of petroleum. For spraying the nose and throat, from twenty-five to one hundred grains to one pint of water (dissolves immediately). For immediate deodorizing and disinfecting, sprinkle the powder direct upon the object affected; the result will be instantaneous. For prickly heat, poison oak, squamous eczema, and other conditions of a similar nature, use from one to eight teaspoonfuls to a pint of water (has proven very serviceable for these conditions). For the purposes above enumerated it hardly has an equal.

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**LISTERINE DERMATIC SOAP** contains the essential antiseptic constituents of eucalyptus (1 per cent.), mentha, gaultheria, and thyme (each one-half per cent.), which enter into the composition of the well-known antiseptic preparation Listerine, while the quality of excellence of the soap-stock



employed as the vehicle for this medication, will be readily apparent when used upon the most delicate skin, and upon the scalp. Listerine Dermatic Soap contains no animal fats, and none but the best vegetable oils; before it is "milled" and pressed into cakes it is *superfatted* by the addition of an emollient oil, and the smooth, elastic condition of the skin secured by using Listerine Dermatic Soap is largely due to the presence of this ingredient. Unusual care is exercised in the preparation of Listerine Dermatic Soap, and as the antiseptic constituents of Listerine are added to the soap after it has received its surplus of unsaponified emollient oil, they retain their peculiar antiseptic virtues and fragrance. A sample of Listerine Dermatic Soap may be had upon application to the manufacturers, Lambert Pharmacal Company, St. Louis, U. S. A.

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"SUMMER COMPLAINT."—During the summer months gastro-enteric diseases, in which diarrhea is a prominent symptom, are very prevalent and most fatal in infants and children. After correcting all hygienic and dietetic errors, an imperative indication is to empty the small intestine and overcome the fermentation and decomposition going on in the alimentary tract.

Phillips' Milk of Magnesia, in doses of a tea to a tablespoonful, is a safe and pleasant laxative for infants and children, and after clearing out the intestinal canal, small doses, five to fifteen drops in a teaspoonful of sterile cold water, every two or three hours, will act as an antacid and gastric sedative controlling nausea and vomiting, and checking any further gastric or intestinal fermentation. It may be combined with opiates, carminatives, astringents, or antiseptics. The mouths of infants and children suffering from "Summer Complaint" need prompt and careful attention, and this can be successfully carried out by swabbing the buccal cavity with Phillips' Milk of Magnesia and wiping the gums with absorbent cotton or a piece of soft linen moistened with it.

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TRIFERROL.—A most palatable and readily assimilated hematinic and re-constructive, will be found of the greatest service in anemia, chlorosis, scrofula, and all debilitated conditions. It does not blacken the teeth and causes no headache, constipation, or other digestive disturbances; indeed, it is an excellent appetizer. Dose: 1-4 drachms three times a day.

Drs. Alexander and Ury, who have used the preparation extensively in Dr. J. Boas' Polyclinic for Gastro-Intestinal Diseases, state (*Deutsche Medicinal Zeitung*): "... We therefore possess in Triferrol a most excellent chalybeate which, as regards absorption and assimilation, is *second to no other hematinic* and has the great advantage of being readily taken and free from all gastric disturbances even in pathological conditions of the stomach; thus Triferrol fills a distinct want and its extensive use is undoubtedly assured."

**THE PASSING OF WINTER.**—With the passing of winter many an individual, without being actually sick, is still weak and debilitated, tiring easily, with greater or less susceptibility to every changing wind. The intelligent physician promptly overcomes this condition by suitable medication, and no more efficient tonic can be employed than the well-known Gray's Glycerine Tonic Compound.

**The Nursing Mother.**—The extra burden which a nursing mother has to bear often places a greater tax on her strength and vitality than she can successfully meet. Rational treatment aims at an increase of her vital physiological functions, and a corresponding increase in her physical strength. No remedy has a more positive value for this purpose than Gray's Glycerine Tonic Compound, and to many a physician it is the one tonic that meets every requirement in such conditions, as it is not only remarkably effective but has no contraindications.

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**ANNALS OF SURGERY.**—Doubtless the anniversary number issued in December, 1904, is well remembered, and the stir it made in the medical and surgical world. Another special number for June has been announced by the publishers, the price being one dollar. This number of the *Annals* will be a remarkable collection of the choicest literature on modern surgery. Each article will be a practical, comprehensive treatise by an eminent specialist who has actually performed the operations described. No expense will be spared to make this the best issue, completing the forty-fifth volume. The colored illustrations, of which there will be an abundance, have been placed in the hands of the leading medical artists of the country, and will be reproduced to the minutest detail. Send your order to J. B. Lippincott Co., Washington Square, Philadelphia, Pa., enclosing the price, and it will be promptly forwarded to you.

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**ARTHRITIS DEFORMANS**, or rheumatoid arthritis, is one of the affections which is most refractory to treatment. Most physicians, conscious of their weakness, make no attempt to arrest the progressive and invading march of these lesions, which often constitute incurable infirmities and condemn the unfortunate patient to total impotence. Jaccoud in France and Wood in America, however, do not take such a pessimistic view of the situation. They both claim to have obtained good results from the salicylates, and in such cases one of the best preparations of the salicylates is colchi-sal. It counts many successes where other drugs have absolutely failed. Of course the deformities, once constituted, cannot be dissipated, but the progress of the disease may sometimes be arrested, and the pain often very rapidly relieved.—*Edmond Gros, M. D., Paris.*

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**COLCHI-SAL** has a very wide application in all conditions attended with or depending on the accumulation of waste or toxic material in the

organism. This applies to gout, acute and chronic rheumatism, and to all affections partaking of their nature.—*International Therapeutics*, October, 1906.

CELERINA, after the removal of alcohol, given in doses of from one half to one ounce every four hours, is speedily followed by the most characteristic symptoms of improvement.

THE USEFULNESS OF GOOD HYPOPHOSPHITES in pulmonary and strumous affections is generally agreed upon by the profession. By all means try *Robinson's*.

## Reviews and Book Notices.

INTERNATIONAL CLINICS: A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to Students and Practitioners by leading members of the medical profession throughout the world.—Edited by WARFIELD T. LONGCOPE, M. D., Philadelphia, Pa., U. S. A., with the collaboration of William Osler, M. D., Oxford; John H. Musser, M. D., Philadelphia; Frank Billings, M. D., Chicago; Chas. H. Mayo, M. D., Rochester, Minn.; A. McPhedran, M. D., Toronto; Thomas M. Rotch, M. D., Boston; John G. Clark, M. D., Philadelphia; J. W. Ballantyne, M. D., Edinburgh; James J. Walsh, M. D., New York; John Harold, M. D., London; Richard Kretz, M. D., Vienna; with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Vol. I, seventeenth series. Octavo, 318 pages, illustrated in colors and black and white. Cloth, \$2.00; half leather, \$2.25. J. B. Lippincott & Co., Publishers, Philadelphia, 1902.

The International Clinics contains something of interest to every physician, being the most practical, economical, and best illustrated work of its kind ever offered the profession. The editorial staff includes medical authorities of the widest reputation with duties that are actual and not honorary, and is one of the strongest associated with any medico-literary enterprise. An encyclopedia for future reference is furnished in specially written articles, by teachers of ability, on topics chosen with a view of

embracing in a short time the entire domain of medicine, affording the general practitioner an opportunity of learning promptly the progress being made throughout the world. The cream of practical medicine and the most recent opinions thereon, as illustrated by the bedside teachings of the best clinicians of both continents, is shown through the medium of concise lectures by the ablest teachers of the leading medical colleges. A post-graduate course is thus furnished at the smallest cost and the minimum expenditure of time, practically bringing the clinics to your desk, instead of you traveling to the clinics.

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**MEDICAL JURISPRUDENCE, FORENSIC MEDICINE, AND TOXICOLOGY.**—By R. A. WITTHAUS, A. M., M. D., Professor of Chemistry, Physics, and Toxicology in Cornell University, and TRACY C. BECKER, A. B., LL. B., Counsellor-at-Law, Professor of Criminal Law and Medical Jurisprudence in the University of Buffalo, with the collaboration of August Becker, Esq.; Chas. A. Boston, Esq.; Hon. Goodwin Brown; W. N. Bullard, M. D.; G. C. Cameron, M. D.; J. Clifton Edgar, M. D.; Jas. Ewing, M. D.; E. D. Fisher, M. D.; J. C. Johnson, M. D.; D. S. Lamb, M. D.; H. P. Loomis, M. D.; W. B. Outten, M. D.; Roswell Park, M. D.; J. Parmenter, M. D.; Irving C. Rosse, M. D.; E. V. Stoddard, M. D.; George Woolsey, M. D.; J. H. Woodward, M. D. Second Edition, Vol. II. Cloth, 8vo, pp. 1008. Price, \$6.00 per volume. William Wood & Company, Publishers, New York, 1907.

In our issue for September last we had the great pleasure of calling the attention of our readers to the first volume of the splendid and comprehensive work, of which we have just received the second volume, in which is continued the important grand division of Forensic Medicine, including Thanatological and bio-Thanatological subjects. The following is a brief synopsis of the various subjects and their authors: Medico-Legal Consideration of Wounds, by Dr. G. Woolsey; Gunshot Wounds, by Dr. Roswell Park; Medico-Legal Relations of Electricity, Dr. W. N. Bullard; Medico-Legal Consideration of Death from Mechanical Suffocation, by Dr. D. S. Lamb; Death from Submersion, by Dr. Irving C. Rosse; Determination of Survivorship, by Prof. T. C. Becker and J. Parmenter; Abortion and Infanticide, by Dr. G. Chalmers Cameron; When Medical Examination is Permitted or

Required by Courts of Law, by T. C. Becker; Pregnancy, Labor, and the Puerperal State, by J. C. Edgar, M. D.; Sexual Incapacity, by Irving C. Rosse, M. D.; Rape, by J. C. Edgar, M. D., and Jas C. Johnston, A. B., M. D.; Unnatural Crimes, by Irving C. Rosse, M. D.; and Railway Injuries, by W. B. Outten, M. D.; a full and comprehensive index completing the volume. Quite a number of illustrative cases are quoted. For both the medical and legal professions this is the most important work of the day, and we can most heartily commend it.

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PHARMACOLOGY AND THERAPEUTICS.—By REYNOLD WEBB WILCOX, M. A., M. D., LL. D., Professor of Medicine in the New York Post-Graduate Medical School and Attending Physician to the Hospital, Consulting Physician to the Nassau Hospital, Visiting Physician to St. Mark's Hospital; Ex-President American Therapeutical Society, Fellow of the American Academy of Medicine, Vice-Chairman of the Revision Committee of the U. S. Pharmacopœia, etc., etc. Cloth, 8vo, pp. 1010. Sixth edition, based on the fifth edition of White and Wilcox's "Materia Medica and Therapeutics." Price, \$3.50. P. Blakiston's Son & Co., Publishers, 1012 Walnut St., Philadelphia, Pa., 1905.

This most excellent work and its companion book, "Materia Medica and Pharmacy," comprise a very complete and up-to-date presentation of the entire subject of materia medica and therapeutics. In order to bring White's "Materia Medica and Therapeutics" into perfect harmony with the eighth revision of the U. S. Pharmacopœia it has been deemed better to rewrite the whole book rather than to attempt a revision, no matter how complete and thorough the effort. The many advances in the subjects treated necessitated the division of the work into two distinct parts, the first being devoted to materia medica and pharmacy, which we had the pleasure of reviewing and commending in our November issue; and this, the second, very ably and thoroughly considering pharmacology and therapeutics. This natural division will be found both practical and agreeable for students and practitioners.

The classification in this volume is based on the particular physiological systems upon which the different drugs or therapeutical agents principally act. There is also a complete list of

drugs, etc., without special description, except as to dosage, and very full accounts of their physiological action and therapeutic uses are laid down. The latest views of the highest authorities are presented, rendering the book as useful and valuable as could well be made, full details as to treatment being presented.

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SECOND REPORT OF THE WELLCOME RESEARCH LABORATORIES AT THE GORDON MEMORIAL COLLEGE, Khartoum.—ALFRED BALFOUR, M. D., B. Sc., F. R. C. P., Edin., D. P. H., Camb., Director. Cloth, 4to, illustrated, pp. 255. Published by the Department of Education, Soudan Government, Khartoum, India, 1906.

We acknowledge the receipt of the Second Report of the Laboratories of the Gordon Memorial College of Khartoum, these laboratories having been founded by Mr. H. S. Wellcome, an American. The first Report was issued in the fall of 1904. Under the able directorship of Dr. Balfour, aided by his many co-workers, have made possible this valuable contribution to science, and to the world of a vast amount of original scientific research of vital interest, which will especially be of untold benefit to the student of tropical medicine, as well as those who wish to keep themselves informed of the existing disease conditions in hot latitudes.

This valuable work is divided into several departments, each conducted by a thoroughly capable, scientific specialist, and is to be earnestly commended to all students of tropical and sub-tropical medicine. A number of excellent illustrations of various insects now accepted as carriers of disease germs, and special forms of disease in both man and animals add no little to the value of the work.

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A PRACTICIAN'S HAND-BOOK OF MATERIA MEDICA AND THERAPEUTICS, based upon established physiologic actions and the indications in small doses.—By THOMAS S. BLAIR, M. D. Over 250 pages, bound in limp library cloth. Price, \$2.00, net. Published by *The Medical Council*, 4105 Walnut Street, Philadelphia, Pa.

Dr. Thomas S. Blair of Harrisburg, Pa., has written a book embodying the results of his personal study, investigation, and

## REVIEW

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## THE SOUTHERN PRACTITIONER.

**TUBERCULOSIS AND HOW TO COMBAT IT.**—By S. A. KNOPF, M. D. Fourth issue, revised and illustrated, with additions. 8vo. Price in cloth, 50 cents; paper, 25 cents. Published by F. P. Flori, 514 E 82nd St., New York, 1907.

This is the very excellent Prize Essay submitted to the "International Congress to Combat Tuberculosis as a Disease of the Lungs," which convened in Berlin in May, 1899, the amount offered being 4,000 marks, no less than eighty-one essays having received in competition, emanating from writers in various countries. The supplement and additions to this fourth issue of Knopf's most excellent contribution to so important a subject are alone well worth the price of publication.

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**MODERN DENTAL SURGERY.**—By A. S. UNDERWOOD, M. R. C. S., L. D. S., F.R.C.S., and DOUGLAS CABELL, M. R. C. S., L. R. C. P., Lond., L. D. S., F.R.C.S. Cloth, 12mo, pp. 126. Second edition. Price, \$1.00. Wm. B. Ewald & Co., Publishers, 1907.

In this new edition the arrangement of matter has been considerably altered to harmonize with more modern ideas, two new chapters on Bacteriology and the Hygiene of the Mouth, have been introduced, and the whole book brought fully up to date. It will be a valuable aid to the dental student, and the medical practitioner will find the time well spent in a careful perusal of its contents.

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## ***Selections.***

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**CAUSE OF CANCER.**—Dr. Nicholas Senn, branding cancer specialists as men with "consciences irremediably blunted" and whose cures such as the X-ray, the "trypsin," "photo-therapy," and those of a medicinal nature as failures, has come to the conclusion that the only cure for cancer is through the use of the knife.

He has abandoned the Roentgen rays, which he had used and depended on for several years, and has given up the employment of radium as a means to kill the dreaded disease. Given an early



opportunity in the treatment of cancer, he believes its progress can be checked by the "excision of every vestige of cancer tissue."

The conclusions he presented are as follows:—

Primitive races are exempt from cancer.

Civilization and luxurious living appear to have a decided influence in increasing the frequency of cancer.

Cancer is most prevalent in Europe and the United States.

Cancer is a parasitic disease.

The real cause and true nature of cancer are unknown, and will have to be ascertained by future observations and research.

Cancer manifests a decided predilection for advanced life, the majority of patients afflicted with this disease being from forty to sixty years of age.

Cancer is a local disease in the beginning, becoming general by its extension through the lymph channels and the general circulation.

Internal medication is useless in inhibiting, arresting, or curing the disease.

The Roentgen rays and photo-therapy are at best only useful in the treatment of superficial cancers of the skin and lip.

The serum treatment of cancer has so far proved a failure.

The only rational and successful treatment of cancer during its early stages consists in the radical removing by excision of every vestige of cancer tissue.

"In the treatment of cancer we still remain face to face with a strange unknown foe," said Dr. Senn. "During the last fifty years we have learned much concerning the tactics of the malevolent enemy of man, and are in a position to deal a successful blow during the beginning of the attack, but remain powerless after the invading forces have stormed and taken the first lines of defense.

"The use of caustics now is confined almost exclusively to the practice of the so-called cancer specialists, a class of ignorant, itinerant, irresponsible men, who prey on the unsuspecting, confiding public. These men have absolutely no knowledge of either medicine or surgery, or if they have their consciences have become irremediably blunted.

"The modest clover of the meadows and roadside and the beautiful violets have had their day in treatment of cancer. There are few drugs indeed which have not had a trial in the treatment of this disease, but none of them has succeeded in checking, much less curing, a single case of cancer.

"Modern aggressive surgery within the limits of prudence has become a boon to cancer victims. The victories over this disease will grow in frequency and brilliancy with increasing knowledge of its nature and with additional improvements of the operative technic.

"We have already learned that cancer is not a microbic disease, hence the search for a curative serum has been, is, and always will remain in vain. The X-ray treatment of cancer, which excited so much public attention, which has been so thoroughly studied by the medical profession, and of which so much was expected in the beginning, has been a sore disappointment.

"An extensive and faithful trial of this treatment has yielded an adverse opinion to its utility. For several years I have advised the use of the X-ray in all of my inoperable cases of malignant disease, and almost without exception it results in an aggravation of the difficulty. These conclusions apply to Finsen phototherapy."—*Indiana Medical Journal*.

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INSUFFICIENCY OF THE GASTRIC MUSCLE.—M. Gross says that insufficiency, or atony, of the stomach is a relatively frequent affection. It differs from ectasy only in principle, not degree. Atony is a manifestation of local or general disturbance of nutrition and circulation, such as leads to general muscular and nervous debility. A simple insufficiency may be changed into a mechanical one by reason of mechanical impediments and permanent hyper-secretion. In simple atony the contents are always accumulated, while in ectasy they are never entirely driven out of the stomach. Insufficiency of the gastric muscle is curable, and not of a serious nature. In addition to the wave motion of the stomach in digestion there is a lifting factor due to contraction of the powerful longitudinal fibers radiating from the cardia to the pylorus. In atony this lifting force is absent. The muscle

may overcome the obstacle presented completely, by means of reserve force, or by compensation, from muscular hypertrophy. This is dependent on the integrity of the regulating system of the stomach, and that on the circulation and enervation. Retardation of digestion is the first sign of insufficiency. The best method of diagnosis of insufficiency is by drawing out the stomach contents after a test meal. There should not be more than one hundred cubic centimeters of fluid. Inspection of the stomach shows stiffening of the stomach, and splashing sound, and percussion aid in the diagnosis. One to three glasses of water drunk on an empty stomach show its size, and the elasticity of the walls. Enlargement indicates diminished tone. After a test meal percussion and splashing sound show capacity. Auscultatory percussion is best. The prognosis is favorable when the condition is early recognized. The vis medicatrix naturæ, aided by irrigations, or douches, mechanical, electric, and hydropathic measures, is the best method of treatment.— *Medical Record*, May 11, 1907.

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THE CAUSE AND CURE OF CANCER.— Arthur C. Jacobson advances a new theory as to the causation of cancer. Parasites may be concerned in the causation of cancer by means of local irritation that they produce, but only thus. The carcinomatous growth is a result of perverted growth, or perverted physiological growth. At the degenerative period of life, when atrophy of the sexual organs occurs, physiological energy that is produced in the body finds itself at a loss for an outlet. This energy goes to produce cancerous overgrowths. People that produce less energy, like the inhabitants of Burmah, Persia, and the East, are less apt to have cancer. Coley's results with toxins may depend on the engagement and diversion of this energy. For the etiology of benign growths the author postulates Cohnheim's theory, trauma, or parasites producing the irritation. For the etiology of malignant growths a further source is needed—perverted energy. Spontaneous disappearance of cancer would be due to readjustment of the energy of the economy. Young healthy individuals cannot be inoculated because the fundamental factor, perverted energy, is wanting. This accounts for the meta-morphosis of

benign into malignant growths. Radical extirpation of cancer is not enough because the perverted energy still exists, causing recurrence. When cancer occurs in the young it is due to sexual anomalies with maladjustment of energy.—*Medical Record*, April 6, 1907.

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THE EXTERNAL USE OF ALCOHOL IN SURGERY.—Alcohol is used by Raphael (*Therapeutische Monatshefte*, No. 9, 1906) both on open wounds and as a counter-irritant on the unbroken skin. He has had good results from the application of compresses to the abdomen in localized peritonitis, notably two cases of typhoid perforation. Ninety-per-cent. alcohol is poured on compresses, which are placed on the abdomen and covered with oiled silk. When it becomes dry the silk is raised, and more alcohol poured on. Cases of mastitis and phlegmons of the fingers were treated in the same way. Infected wounds are washed with strong alcohol and a compress soaked in the same applied. Eczema and erysipelas are also favorably influenced. In cases of puerperal endometritis the womb is washed out, first with fifty-per-cent. alcohol, and if this is well borne, with ninety-per-cent., and a tampon soaked in alcohol is laid in the vagina. A compress is also placed on the abdomen. All cases handled in this way have resulted in prompt recovery. Its action is not due to bactericidal properties.—*Therapeutic Gazette*.

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QUININE IN INFLUENZA.—Sir William Broadbent (*Practitioner*, January, 1907), speaks highly of quinine, not only in the treatment, but in the prophylaxis of influenza. He uses one drachm of ammoniated quinine and two drachms of liq. ammon. acet. every hour for three hours and then every four hours. In fulminating attacks, where coma has occurred, quinine hydrobromide, hypodermically in large doses, has given complete relief. During the prevalence of an epidemic he has ordered two grains of quinine every morning as a prophylactic and has satisfied himself from extended observation that it really is of considerable value. He quotes instances from schools showing that those who took quinine prophylactically did not get influenza while those who omitted it did.—*St. Louis Medical Review*.

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EDITOR AND PROPRIETOR

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No. 7

*Original Communications.*

GENERAL ANESTHESIA WITH CHLOROFORM AND  
ETHER.\*

BY HERMAN HAWKINS, M. D., JACKSON, TENN.

A COMPLETE paper on this subject would include a discussion of all substances used to produce general anesthesia. I confine myself to chloroform and ether for three reasons. First, because the problem of a perfect general anesthetic is still unsolved, and until it is, the profession will continue to depend principally upon these two. Second: Universal use requires general knowledge; and effort should be made to perfect individual skill in administration by reviewing and emphasizing familiar but important features of the subject. Third; for the sake of brevity.

\*Read at Annual Meeting of Tennessee State Medical Association, at Nashville, Tenn., April 1907.

Objections can be urged to both of these drugs, and both are chargeable with fatalities immediate or delayed; yet death is often ascribed to the anesthetic, when really due to ignorant and careless administration. We cannot afford to shift our responsibility at this point; the plea that "all cannot be experts" is no excuse for ignorance of at least a general working knowledge of the subject, and carelessness is not only inexcusable but criminal.

Personally I prefer ether, but not to the entire exclusion of chloroform; on the contrary, I take the broader ground of urging every physician to be familiar with the administration of both, and to be prepared to say which should be selected in a given case. The physical condition of the patient may make the selection important, and frequently occasions arise for a change from one to the other during an anesthesia. As a choice requires a knowledge of the physiological action of these two drugs, permit me to refresh your memories by mentioning a few characteristic effects of each. Ether is very irritating to the air passages, raises the blood pressure, must be used in larger quantities; and largely because of this fact is more irritating to the kidneys, has a longer and more violent convulsive stage, and its vapor is highly inflammable.

It is therefore contraindicated in nephritis, in diseased lungs, or arterio-sclerosis; but it is, generally speaking, safer, and gives warning of approaching death, which, if immediate, is usually from failure of respiration; if delayed, from broncho-pneumonia or some renal complication.

Chloroform is more pleasant to take, is quicker, and anesthesia is more profound; the quantity required is so much smaller, and it is not so irritating to the kidneys nor respiratory passages. It lowers blood pressure, is easier managed, and the convulsive stage is less pronounced, if not entirely absent. Its vapor is non-inflammable. But it is a capricious drug, death occurring suddenly from paralysis of the heart, sometimes at the beginning of its administration, and no guide to its effect can be deduced from past anesthetics in the same individual. Not long ago I gave chloroform to a man who stood it well. In a short time a second operation was required, and I began the anesthesia with chloro-

form again. After a few minutes the patient was seized with tetanic spasms of the muscles, pulse and respiration stopped suddenly. Prompt restorative measures resuscitated the patient, but the seizure was so alarming, abandonment of the operation was seriously considered, but no further trouble was experienced after ether was substituted.

You will note the unusual violence of the muscular spasm threatening death, so rarely seen in chloroform anesthesia. The anesthetist should examine the patient for himself. This examination should include not only interrogation of heart and lungs, but time and character of last meal, arrangement of clothing, general physical condition, and removal of any foreign substance from the mouth, such as false teeth or gum. I once had to ask a man to remove a chew of tobacco after I had commenced the anesthesia. If properly made, this examination will help to gain the confidence of the patient, and this is important, for people are more afraid of the anesthetic than of the operation; and the anesthetist who instills confidence by his manner and begins the administration quietly and gently will find his task easier and the convulsive stage milder and shorter.

You but add to the patient's terror by exercising force before he becomes unconscious. Let him hold the mask himself at first, or ask him to hold up one hand as long as possible; assure him of your care and watchfulness, but never allow him to talk or urge him "to breathe deep." The process is one of transition from a state of wakefulness into a dreamy condition gradually deepening into complete insensibility, and mental impressions made during the dreamy state seem to be retained by the subconscious mind up to the stage of complete anesthesia. I favor a hypodermic of morphine and atropine thirty minutes before the anesthetic is commenced. It steadies the heart, allays nervousness, and allows a more even anesthesia and less of the anesthetic is required.

Bronchial secretions are limited, and with chloroform the atropine raises the blood pressure which chloroform lowers, and by its action on the pneumogastric tends to block off inhibitory reflexes from the heart. The mode of administration is of prime import-

## THE SOUTHERN PRACTITIONER.

yet has not received the general attention it merits. I am strongly convinced that the "open drop method" is the only correct one, and its universal adoption will favorably influence mortality statistics of these two drugs. This method demands constant attention of the anesthetist, a very much less quantity of the anesthetic to produce and maintain the proper degree of surgical narcosis with a corresponding margin of safety in administration, and by its use some of the common errors of administration are avoided.

I once saw an operation interrupted to resuscitate a patient under chloroform. This accomplished the anesthetist resumed work by pouring a quantity of the drug on the mask. The patient took one breath and no more; death seemed instantaneous. I am sure the result would have been different if the drop method had been used. A patient under anesthesia is on the border line between life and death, and deviation from it very much either way may be disastrous.

If administration is timid, the operation is impeded and danger of nervous reflex is invited. On the other hand if recklessly the danger line may be passed beyond recovery. Respiration, circulation, pulse, and eye should be watched for danger signals; respiration especially, but dependence cannot be placed on one of these to the exclusion of the others. A quick inspection of ear and color of face together with temporal or facial pulse will indicate the character of circulation and action of heart, and respiration can be determined both by sight and sound. An abnormally dilating pupil under chloroform must never be disregarded, but under ether is not so significant. The eyes should be protected by a pad of cotton which can be easily lifted for inspection.

It is barbarous to omit this, and equally so to jab the finger against the cornea to test the reflex. This reflex is not worth counting on as a guide to degree of anesthesia anyway; but if an eye is wanted a touch at the edge of the lower lid is just as effective and no harm will follow. The position of head has much to do with the condition of the patient, while there is no fixed adjustment suited to each case should be made, the object



in view being to prevent obstruction to respiration. The relaxed tongue drops back over the epiglottis and secretions collect in the throat when the head is held straight, with resulting labored respiration, blue face, and throat rattle. If the head is turned to one side and lower jaw pressed forward the mucus will collect in lower cheek where it can be easily removed, and the base of the tongue will be carried forward, leaving a free passage for air to enter the lungs.

This simple procedure produces marked improvement and renders use of tongue forceps exceptionally necessary, though the latter should be on hand. Emergencies, however, may arise in spite of care and skill, and should be looked for to the extent of being prepared to meet them intelligently. Hazy ideas, with the pressure of necessity for rapid action, produce panic with results that would be amusing under less serious circumstances.

For instance, artificial respiration is important, and usually the first thing thought of; but as often practiced, the arms are pumped back and forth thirty or more times per minute, pressure being made upon the thorax without regard to movement of arms, the relaxed tongue meanwhile allowed to obstruct the entrance of air; a combination admirably calculated to defeat the object of the manipulations.

Fresh air is a vital necessity, but not in the form of a strong breeze twenty to forty degrees colder than the air of the operating room directly on a thinly-clad sweating patient. The reflex stimulation of alternate cold and heat to chest need not necessarily mean a douching of body with hot and cold water. Remedies administered hypodermically should have some therapeutic adaptability to the case besides the general claims of being "heart stimulants." Nitro-glycerine would hardly be appropriate if blood pressure was low, yet doubtless all of us have seen it given in just this condition.

A working knowledge of blood pressure is almost indispensable to the anesthetist, and equally valuable on other lines than the one under consideration. Exhaustion or paralysis of the vasomotor centers is often the real cause of death, the heart failing because of a lack of nutrition from the coronary vessels, a re-

sult of the general low blood pressure. This fact should guide treatment, which consists in part of fresh air, compression of limbs and abdomen, with the hypodermic use of blood-pressure-raising drugs, such as atropine, strychnia, and especially adrenalin, which for this purpose and quick action is worth all the rest together. A very common form of collapse occurs when the heart is so profoundly anesthetized as to be unable to empty itself, and sudden failure of circulation threatens, "due to paralysis of the heart from over-distension of its chambers." Lowering the head or saline infusion would both be contraindicated at first, because both would increase the over-distension. Rather the forty-five degree elevation of body with rapid rythmical massage of the thorax would be proper, because gravity would tend to relieve the over-distension, and the thoracic massage over the heart will alone maintain a measure of circulation.

*After* the over-distension is relieved, further treatment may require lowered head with saline infusion and adrenalin. The first point I wish to make is: the necessity for quick, accurate diagnosis and precision of remedial measures if best results are to obtain. Shock occurs in every operation, the degree depending upon locality, trauma, manipulation of tissues, and general surgical technic. If degree of shock is great and anesthesia is unnecessarily profound, death may occur as a result of the combination. *When practiced*, "nerve blocking" in certain regions will lessen or prevent surgical shock, and the effect of the combination can be mitigated if the depth of anesthesia is varied in accord with the steps of the operation, surgeon and anesthetist working harmoniously in patient's interest.

The position of anesthetist is no place to study surgery, and if he does his duty he will know but little about a given operation, yet his general knowledge of the steps necessary to its performance, coupled with an occasional word from the surgeon, will enable him to manage the anesthetic to the best advantage.

Under all circumstances the anesthetist should be guided by this rule, "Give all needed, but not one drop more than is necessary." While many valuable points press for mention, perhaps enough has been said to emphasize some general features of the

subject which may prove helpful. I therefore close with this advice, Time each administration, and measure the amount of drug used in every case.

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### LOCAL ANESTHESIA.\*

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BY PAUL DE WITT, M. D., NASHVILLE, TENN.

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*Mr. President and Gentlemen:* Local anesthesia has, in the past few years, been the subject of much study, and success has followed experimentation. The dangers of pulmonary anesthesia, with fatalities where they are often least expected, have caused many surgeons to eliminate these dangers whenever possible. The risk of life, the unpleasant and often distressing after-effects of ether and chloroform are done away, the dread of "going to sleep" is eliminated, and many whose sufferings could be relieved by surgical means are reconciled to the knife because these bugbears are removed.

Yet, notwithstanding its proven usefulness and efficacy, it is not employed to the extent it should be. Only in minor surgery do we find it universally used, while a great number of major operations can be performed, not only with every detail of technique used with general anesthesia, but often with added advantages as to the success of the operation. For instance, in inguinal herniotomy the integrity of the nerves supplying the part is maintained; but under general anesthesia how many surgeons stop to think whether they are cutting nerve or fascia or fat? All tissues are alike to them, and they cut nerves just as they would an obstreperous bloodvessel in the way. Thus the chances of recurrence are increased because of the atrophy which follows the cutting off of the nerve-supply to the part. Again, in strangulated hernia, by local means, the constriction can be relieved, and after exposing the blackened intestine hot applications may be applied indefinitely, and after the return of the

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\*Read at Annual Meeting of Tennessee State Medical Association, at Nashville, Tenn., April 1907.

mal color the intestine replaced in the abdominal cavity, and operation for the radical cure of hernia completed. The patient, all this time, suffers little inconvenience, not having the risk of pulmonary anesthesia added to that already produced by the strangulation.

By statistics, the mortality of major anesthesia is one in fifteen thousand for ether and one in eight thousand for chloroform; and this percentage is, doubtless, much greater considering unreported cases and following pneumonias. It has been my lot to witness three deaths from general anesthesia before the scalpel was used, and all three in the hands of competent men. I have not seen eighteen thousand ether nor eight thousand chloroform anesthetics. Yet, considering even so small a percentage, are we justified in subjecting our patients to this risk when our object can be attained just as fully without the risk. Ether and chloroform are administered daily for conditions that could just as easily be corrected by local means. Suppose in one out of these minor cases the patient proves to be the unlucky one, all per cent., and gives up the ghost from the anesthetic, where does the blame lie? So, right here, I put in a plea for local anesthesia wherever its use is possible.

Chief among the drugs used are beta-eucain and cocain. Eucain is a synthetic product, less toxic than cocain, and may be sterilized without decomposition by boiling. However, its analgesic action is not so certain; it occasionally produces sloughing, and, according to Stevens, is more irritating than cocain. Some operators claim it to be less irritating in rectal surgery. I have used both extensively and have not noticed any practical difference.

The greatest disadvantages of cocain have been its toxicity and difficulty of sterilization; happily these have been largely overcome by using weak solutions, and especially prepared in ampoules. It is decomposed by boiling, hence sterilization is difficult. A very reliable drug company has now on the market sterilized cocain in hermetically sealed glass tubes. These tubes contain also sodium chloride in quantity sufficient to make normal saline solution when added to a given amount of water.

Schleich's solution contains morphine, but it has no advantage over the plain solution. Weak solutions produce anesthesia chiefly by the action of cocain, and, in lesser degree, by the pressure of the fluid on the nerve filaments. Cocain is now conceded to be the best and most reliable agent for producing local anesthesia.

Hot sterile water or saline solution will often suffice for the removal of small superficial growths, and, as was demonstrated by Gant of New York, for many cases of hemorrhoids. I prefer cocain in all cases because there is less distension of the tissues and the anesthesia is more complete.

The requirements for successful work are three-fold; first, concerning the surgeon; second, the patient; third, the assistants. First and foremost, the surgeon must have absolute control of himself and perfect confidence in his ability to complete the operation. Here comes in the question of hypnotism and suggestion sometimes made against local anesthesia. These claims are made by those who have either not tried it, or tried it and failed because of lack of self-confidence and knowledge of technique. Hypnotism implies somnambulism or trance, and hence does not deserve discussion. Gould's definition of suggestion is, "The artificial production of a certain psychic state in which the individual experiences such sensations as are suggested to him, or ceases to experience those which he is instructed not to feel." Now, if you tell a man he will not feel anything and then attempt to operate on him, he will very promptly disabuse your mind of the fallacy in no very uncertain terms. If you really had psychic influence over him, he might possibly not feel the knife, and this, according to Gould, would be suggestion.

But, if when making the first puncture with the hypodermic needle, you tell him he will feel a twinge of pain and you make that twinge as light as possible, you will soon gain his confidence, because he sees you know what you are doing and are not going to fool him, and he reads in your undisturbed countenance perfect self-confidence, and by your self-control you gain his confidence. He watches your face, your every movement, he listens to every remark, and every minute of successful work adds

to his mental ease. But if at any time he reads uncertainty, or imagines the operation is not progressing as it should, immediately he pictures the worst, thinks he can't get through it, has a sense of impending danger, sweat cold and clammy will break out, the pupils dilate, and he is the picture of collapse and shock; and then, to cover our own faults, we say the cocain is having systemic effect and we condemn cocain as being unsafe, when, in reality, it has nothing to do with this state of affairs. Very weak solutions are used for hypodermic work, and the average amount of cocain should not exceed one third to one half grain for an hour's operation; part of this never reaches the general circulation because it is taken up by the gauze swabs used in clearing the field from blood. Also, one fourth grain of morphia should be given hypodermically from fifteen to thirty minutes before the operation. It is the physiological antidote to cocain, and by giving the antidote beforehand, systemic effects do not appear. Morphia serves another purpose, but of this we will speak later. Then, with such a very small amount of cocain, and that already offset by morphia, this picture of the systemic effect is not due to cocain, but is the psychic phenomena due to the fear and revulsion felt by many when being "worked upon," being fed into a flame by his reading uncertainty in the countenance of the operator. Then control yourself, and you can control your patient, and the so-called suggestion is only the same confidence you strive to inspire when first you walk into the sick chamber.

Obviously, a knowledge of technic is very essential. The term "local anesthesia" is in reality a misnomer. Anesthesia implies loss of sensation of both pain and touch, and by local means the sense of touch is never lost. "Analgesia" is the more proper term, which implies loss of pain only; touch without pain being the sensation: this must always be borne in mind. When the skin incision is made, the patient feels something "drawn across," but cannot distinguish whether it is a finger or a knife. The retractors give the sensation of pressure, etc.

Every detail of preparation must be completed before bringing in the patient, and it is well not to have too many instruments displayed until he has become accustomed to the surroundings

and furnishings of the operating room. His ease and comfort must be considered at all stages; in fact, all hands must be comfortable. A cramped unnatural position will soon wear any one out.

Assuming that cocain is used, a one fifth of one per cent. solution is the strongest needed. It must be fresh, sterile, and hot. Fresh, because in a solution six or more hours old a fungus growth appears which will cause suppuration; sterile, to prevent the introduction of infection; hot, because a hot solution produces quicker and more complete analgesia. An all-glass syringe is preferable because it is more easily cleaned and sterilized.

Having told the patient you are going to prick him, the needle is introduced into the skin, not beneath it, and the solution injected until a small wheal forms between the layers of the skin, where the terminal nerve filaments lie. The needle is now withdrawn and reintroduced in the opposite edge of the wheal, which is analgesic, and another wheal formed. These are continued until the entire length of the incision is infiltrated. Going thus from wheal to wheal, only the first puncture is felt. After the skin is incised, the structures are cocainized as reached with a one tenth of one per cent. solution. Nerve trunks are injected with a one fifth of one per cent. solution underneath the sheath, till they turn white. As was demonstrated by Crile of Cleveland, a nerve thus blocked is incapable of carrying impulses to or from the cord to the whole area of distribution beyond the blocking. Anesthesia thus produced will last easily an hour, and the skin may often be sutured without inconvenience in an hour and a half.

In no class of surgery is a knowledge of anatomy more needed. Nerve trunks are to be cocainized, hence their location must be known. The cutting or clamping of bloodvessels causes a twinge of pain, hence their position should be known so their riddance may be provided for. This is anything but a case of "cut what you see and tie what you cut."

Concerning the patient, each peculiar temperament has to be considered. Men, as a rule, are the best subjects, on account of their less highly strung organism and greater familiarity with such scenes. Women are naturally more afraid of a knife, and

by their sensitive natures are more averse to being carved upon; but, if once their confidence can be gained, they often make better subjects than men. Many patients start into an operation with grave doubts and misgivings, which have to be dispelled by the surgeon's watchful and tender care. Idiosyncrasies to cocaine need not be considered if weak solutions are used and morphia administered beforehand. My experience with the drug covers several hundred operations, such as herniotomy, thyroidecomy, laparotomy, amputation, rectal cases, etc., chiefly in the New York Polyclinic Hospital with Doctors Bodine, Tuttle, and Gyle, and in not a single instance did we stop to consider idiosyncrasy.

The second advantage of morphia is the sense of comfort and well-being. It gives the feeling of ease and abandon, so to speak, makes the timid bold, allays fear, and revives a courage which has flagged at sight of horrid surgeons in their barbarous apparel. With siren-like insidiousness it creeps over the spirits and holds such an enmity with the cowardice of man, that swift as quicksilver it courses through the natural gates and alleys of the body, and with a sudden vigor it doth posset and curd, like eager droppings into milk, the flagging spirits; and a most instant courage, hero-like, covers the countenance of the victim to gladden the heart of the operator.

Many people imagine they cannot stand to be "carved up" while awake. With some this is a genuine revulsion; with many it is only chicken-heartedness, which is soon overcome when once the operation is begun.

A great fallacy is to allow the patient to imagine he is "standing it." This puts him in the attitude of a martyr with the surgeon the executioner. This should not exist either in fancy or reality. If it exists in fancy, he will not give the operator credit for skilful work, but will place the credit to his own account as being "nervy." If it exists in reality, the surgeon is to blame. Operations can and should be done with less pain than a bad mosquito bite. If not enough solution has been used to control pain, inject more, even if it runs into grains of cocaine. Morphia is always at hand and will control it.



## ORIGINAL COMMUNICATIONS.

The assistants are, by no means, a small part of cocaine surgery. They can ruin an operation before the surgeon has his gown, or they can make it easy for all concerned. Talking, noise, and especially rattling instruments will do more to disconcert the patient, make him nervous, and increase his pain than the chief will do while operating. On the other hand, the assistant who realizes the nature of the work, is considerate to the patient and mindful of the wants of the operator, anticipates the needs of the patient, and can add most materially to the success of the under-entertained surgeon.

The range of cocaine surgery would fill a paper longer than this one, so we can only outline it here. I firmly believe that fifty per cent. of all surgery can be done with local anesthesia. Hernia, varicocele, suprapubic cystotomy, hydrocele, castration, vasectomy, non-suppurating bubo, hemorrhoids — internal and external, removal of lipomata, sebaceous cysts and other superficial growths, thyroidectomy, neurectomy of the great nerves, amputations below the elbow and below the hip, suturing of the patella and clavicle, and many other operations belong to the cocaine field. Abdominal sections are, as a rule, contraindicated because of any difficulty in opening the abdomen, but because the exact intra-abdominal condition is never known till it is opened, and adhesions cannot be handled locally. Interval appendectomy in cases with very few adhesions can be done on thin-walled peritoneum with little discomfort, but the majority of people won't stand their abdomens being opened while awake. Perforating duodenal ulcer can often be handled with ease. The abdominal wall can be incised without pain, but cutting the parietal peritoneum feels like a pin-scratch with a slight sickening sensation.

There is contraindication to general anesthesia from cardiac disease; for other cause, we should not hesitate to proceed with cocaine.

One of the greatest boons is amputating in shock from a traumatic accident. To amputate in shock is conceded to be bad surgery. This is because the shock of the operation is too great added to that already produced by the accident. Shock from amputating comes: first, from the pulmonary anesthetic; and second, as was shown by Crile, from cutting nerve trunks which are in wide open circuit with the spinal cord. In amputating

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These two shock-producers are done away, because the nerve trunks are blocked with cocain before cutting.

Suturing a fractured patella is very easy.

Inguinal herniotomy is, perhaps, more often done with cocain than any other major operation. The technic is very simple. The skin is infiltrated, incised, and the aponeurosis of the external oblique exposed. The ilio-hypogastric nerve is cocainized and the aponeurosis incised, exposing the inguinal canal. Here we cocainize the ilio-inguinal and the genito-crural nerves accompanying the cord. These nerves are occasionally broken up into many filaments or are difficult to find: here blocking the ilio-inguinal and infiltrating the parts will suffice, according to Boine's latest report. All details of the ordinary technic are carried out.

Local anesthesia is especially fascinating. It brings into play the individuality of the operator, his equilibrium and judgment, his power of self-control, delicacy of touch, and regard for the feelings of his patient. Gruff words and rough handling are incompatible, and at all times his best efforts are called forth.

Now to recapitulate:—

Fifty per cent. of all surgery can be done with local anesthesia.

Cocain in weak solution is the best drug.

Morphia must be given beforehand.

Idiosyncrasies need not be considered.

The surgeon must have absolute confidence in himself and in cocain, knowledge of technic and anatomy.

The patient's comfort is to be considered at every point.

The assistants must be careful and watchful and let the surgeon do the operating.

Having complied with these necessities, there is no reason why local anesthesia should not be more universally used, and many misfortunates, who carry their ills to the grave rather than take an anesthetic, be relieved of their suffering and pass their remaining years a comfort to themselves, a happiness to others, and a living monument to the profession whose first duty is the relief of suffering and betterment of mankind.

## PROSTATIC SURGERY.\*

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BY W. A. BRYAN, M. D., NASHVILLE.

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IN view of the wonderful improvement made in the last few years in the technic of operative prostatic work, the corresponding reduction in the mortality, and the gratifying relief to suffering men, I think it wise for us to thresh out the merits of the different courses pursued with these patients until some general definite conclusion is accepted, not among surgeons, for they are practically a unit, but throughout the rank and file of the practitioners of medicine. I feel sure that if we can present to our patients the facts as they stand, there will be more unpleasant symptoms relieved and a marked increase in the longevity of men who have passed their fiftieth year.

It is fair to state that one man out of three who have reached the age of sixty has enlargement of the prostate, furthermore, while many of these do not have miserable symptoms and can so be eliminated from this discussion, yet the majority do suffer horribly, however secretly it may be from pride or fear that their condition is a tell-tale record of a youthful past. Again, it is true that a large percentage of those whose prostates are enlarged to the point of suffering die of the lesions resulting directly or indirectly from the fact that their urine can either not be voided entirely, or even partially, and that catheter life, which is an apt synonym for short life, is resorted to. The dangers of this need only be mentioned to one who has a horror of using the catheter very temporarily after certain operations and under the most favorable circumstances.

If under the most strict regime for a brief period, the use of the catheter is fraught with harm, what may we not expect from it in those who can have no conception of surgical cleanliness? If the use of the catheter in the hospital for a few times is always avoided if possible, and if it makes pus and blood in the

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\*Read at Annual Meeting of Tennessee State Medical Association, at Nashville, Tenn., April 1907.

urine in normal bladders of young and healthy patients, how infinitely worse must the average result be in the old, decrepit man whose bladder is diseased perhaps already, when day and night he is to catheterize himself with his vest-pocket catheter months and years? Easily now can every advocate of catheter life think of a case who has used the catheter comfortably to himself and satisfactorily to his physician for ten years or more and he knows that there need be no other advice for any case. So it was argued that medical treatment cured appendicitis, until they argued themselves out and quit in shame, for to-day every one knows better. So they reasoned ignorantly that gall-stones needed no other than some undemonstrated panacea, until the whole of the profession came over and admitted like men that cholelithiasis was amenable only to the knife; and so again ulcer of the stomach lasted uncured until gastro-enterostomy came to its relief. Prostatic surgery is but taking its turn around the same circle all these others have gone; it is history repeating itself. The catheter has little place in the treatment of hypertrophied prostate. It has served its day, for when the urine is residual in sufficient quantity to need removal, or when the obstruction is so great that passage of the urine is accomplished only with straining or not at all, then is the catheter's great opportunity for harm. Let me state it briefly: There is one treatment for hypertrophied prostate, when it demands any treatment, and that is prostatectomy.

The effects of prostatectomy on the sexuality of a man are baneful, lamentable, that is in part, for the sexual life of most of them is behind them; they have had their menopause, and what remains is only a shadow of their former glory. Not many have escaped prostatectomy with intact sexual power. But, let me insist, less is lost than is gained; before operation they are powerless because they are sick, after it because they are well.

The method of removal used depends on the operator. The results of the suprapubic and the perineal are slightly different in favor of the latter. But the operation chosen is largely a result of the experience and training of the surgeon. The mortality of either is small compared with non-operative treatment. That

fistulæ are occasionally seen need scarcely enter into our discussion here. They do not usually persist long and when they do can usually be relieved by curetting away their lining. If they do persist it is better to have a vent through two openings than one.

Not every case can stand a prostatectomy. Then permanent drainage may be done, or if preferable a two-time operation may be executed after the suggestion of Chetwood. When the patient is very feeble he will likely improve by simply draining the bladder either suprapubically or perineally; this may be done and after a sufficient lapse of time, if the symptoms subside sufficiently, a complete removal of the gland may be done with a much lower mortality than would have been possible. Every step should be taken during the interim to assuage the infection of the bladder and kidneys, and to build up the patient's resistance for the more serious undertaking.

The age limit for patients is very difficult to determine, and will always be a matter to be settled by the judgment of the surgeon. It is better to do a permanent drainage on the very old than to take chances on a radical procedure. It has always been a much harder problem for me to determine what patients can stand an operation and what cannot than to decide whether an operation is indicated. In all very old men it is preferable to do some minor operation to prolong life and relieve pain, even if only with half way comfort, than to attempt the ideal treatment and fail.

I wish here, as in a paper I read at Chattanooga in October last, to condemn the partial excision of a large prostate in those patients whose condition warrants radical measures.

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### A GOOD INTESTINAL ANTISEPTIC.

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BY S. E. FOWLER, M. D., KANSAS CITY, MO.

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AFTER having used Glyco-Thymoline as an intestinal antiseptic in my practice for some time, and having given it a thorough test in a great number and variety of cases, I do not hesi-

tate to say that in Glyco-Thymoline we have placed in our hands another excellent weapon with which to combat certain forms of disease, and in cases where the use of a remedy of its nature is indicated I consider it far superior to any preparation I have ever used.

*Case 1.*—J. P., male, aged 22, had been troubled with nausea, loss of appetite, diarrhea, and slight fever for several days. When called I found that the true dysenteric symptoms had set in, viz., pain on pressure along the transverse and descending colon, colicky pains about the umbilicus, burning pains in rectum, stools a grayish tough transparent mucus streaked with blood, urine scanty and high-colored. I flushed the bowel with a solution of warm water and Glyco-Thymoline, one ounce to the pint of water.

R Glyco-Thymoline

Liq. bismuth, aa  $\bar{3}$  iv.

Sig.: Tablespoonful every two hours.

In a very short time all the distressing symptoms had disappeared, and in a few days patient had fully recovered his normal health, although somewhat emaciated and weak.

*Case 2.*—R. P. C., male, aged 26. Found patient greatly prostrated; nausea, vomiting, cold skin, feeble rapid pulse, anxious expression on countenance, stools frequent, containing blood, pus, and some gangrenous mucous membrane.

*Diagnosis:* Epidemic dysentery. Ordered high irrigation of warm water with Glyco-Thymoline, one ounce to each pint of water, same to be repeated every six hours, milk punch at frequent intervals and diet of the most nourishing character. I gave the patient Glyco-Thymoline and bismuth internally, as in Case 1, and when I saw patient again in six hours I noticed a great improvement in his condition. In forty-eight hours feces had begun to appear in the stools. I then ordered the Glyco-Thymoline mixture to be given every four hours. The patient made a good recovery, and I have every reason to believe that the disease did not leave the bowels in a crippled condition (as is often the case) either from loss of structure or cicatrices.

*Case 3.*—R. E., male, aged 30. I found patient with severe headache, feverishness and malaise, stools consisting of muco-pus.

uneasy burning pain in rectum, and constant desire to stool. Ordered high enemas of tepid water with one ounce of Glyco-Thymoline to each pint of water, to be repeated twice daily, and Glyco-Thymoline to be taken in two-teaspoonful doses diluted with water every two hours. Recovery rapid and complete.

*Case 4*.—Child aged four years, had been troubled with a diarrhea for two days before I was called in. I found patient with considerable fever, no appetite, moderate vomiting, pain and tenderness in abdomen, stools semi-fluid, greenish, mixed with yellowish portions of ordinary feces, the typical "chopped spinach" stools. I gave directions in regard to diet, cleanliness, ventilation, etc., and prescribed:—

Glyco-Thymoline,

Liq. bismuth, aa 3 ii.

Sig.: Two teaspoonfuls every two hours.

I could notice a decided change for the better in six hours, and a continued use of the above prescription resulted in the patient's complete recovery.

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## MELANCHOLIA AND SUICIDE.

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BY W. T. MARRS, M. D., PEORIA HEIGHTS, ILL.

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SUICIDE is increasing at a rate that is out of proportion to the increase in our population, and it is only natural that we endeavor to ascertain the cause, and, so far as possible, strive to prevent it. Poverty, privation, and physical want cannot be put down as strong factors of causation, for most people these days are able to keep the proverbial wolf from the door. Furthermore the majority of suicide victims are not numbered from the ranks of those in indigent circumstances.

Upon careful analysis we find as the rule that despondency and disappointment are the exciting elements that prompt the consummation of self-destruction. It may be disappointment in business, love, or politics, or defeated aims and ambitions along almost any avenue of life. But what is back of all this? These states of

mentality are only secondary to a preceding condition of nerve instability and unrest which may have existed for months or years. Of the many and varied neurotic disorders I look upon melancholia as demanding more careful and painstaking attention than any other, my reasons being at once apparent. In this peculiar psychosis there may be few symptoms either objective or subjective, and of course there is absence of any pathologic basis. The melancholiac, unlike the sufferer from hysteria or neurasthenia, is never demonstrative, choosing to suffer in silence and alone. In his morose, sensitive way he is reluctant to make known his mental agony to others. Perhaps if his pent-up nervous energy were released even in an occasional "nerve storm," 'twould be better for him, but he restrains himself at the expense of his vital forces.

Here it is that the family physician, if he be astute and skilful, may step in and be of great service toward averting a disastrous end. In such cases advice may be gently and kindly volunteered, for the sufferer seldom seeks relief for this particular phase of his trouble. If he speaks of it at all it is likely to be in a casual manner. Several have told me that they were loth to speak of their symptoms lest they be considered hysterical or "cranky." But melancholia is not hysteria, nor is it hypochondriasis, nor neurasthenia. It is all these rolled into one, and more too, so far as mental distress is concerned. When the condition is firmly entrenched in the sufferer's mind he cannot see a cloud with a silver lining, but gloom and pessimism stare him in the face whichever way he turns. If you enumerate the more common symptoms of the affection you get in touch with him and thereby gain his confidence, and he is more likely to carry out your treatment if he reposes full confidence in you. My reason for naming this point is that many physicians have a way of pooh-poohing at the mental vagaries and other conditions not supported by a pathologic cause. All the suffering in the world is not revealed by microscope and scalpel.

In the way of treatment I would suggest a change in the patient's environment and way of thinking and living. Diet is a matter not to be neglected, since it is argued that man is a living



reflex of what he puts into his stomach. Foods that contain phosphorous and the earthy salts are indicated, as in chronic cases there is an impaired nutritive function in the brain and larger nerve centers. Melancholia patients are usually constipated, and reabsorption from the intestinal tract helps to perpetuate the trouble. Small doses of calomel and podophyllin with salines are usually indicated. If the liver is not functioning properly *cascara sagrada* should be administered for some time. These patients should be admonished to cultivate relaxation and take an abundance of sleep in order to restore tone and equilibrium to the nerve cells and centers. *Neurilla* I have always found to be a valuable nerve-calmative with no unpleasant after-effects. It helps to promote natural sleep and the patient does not become habituated to its use. Morphine in these cases is likely to engender a narcotic habit. The sufferer from melancholia demands the best of care and attention lest he become a victim of suicide or his case eventuate into incurable insanity.

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## HEPATIC INSUFFICIENCY A FACTOR IN THE ETIOLOGY OF NERVOUS AND MENTAL DISEASES.

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BY H. RICHARDSON, LECTURER ON NEUROLOGY AND PSYCHIATRY,  
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To appreciate the importance of the liver and its relations to the healthy functionation of the nerve cells we must remember that it is the largest organ of the body and that one of its functions is to preserve the body from auto-intoxication as well as to perfect the elements of nutrition for assimilation. From the excesses and abuses to which we subject the digestive functions, producing various toxic substances, which if not arrested or modified by the liver a toxic condition would soon be produced which would prove fatal in a short time. There are but three ways, by which the cells of the body can be destroyed, starvation, traumatism, and intoxication consequently upon the liver devolves the principal function of keeping both the mind and body in a

normal condition. From the alimentary tract come the exogenous toxins, alcohol, lead, arsenic, etc., and also the endogenous toxins product of perverted or imperfect digestion. The emotions, as grief, worry, anger, effect it also and are through it a powerful factor in producing disease. It is usually asserted that alcohol and cirrhoses of the liver are very closely linked together, and yet on post-mortem examination many heavy drinkers fail to show the typical hob-nailed liver, while this condition is often found in temperate or abstemious persons. Boix in his interesting work on "The Liver of Dyspeptics" has explained this very clearly. He has shown by numerous experiments on rabbits that the various toxic acids resulting from disturbances of the stomach, readily produce the cirrhosis that we are prone to attribute to alcohol. In his experiments he caused rabbits to swallow butyric, lactic, valerianic, acetic, oleic, palmetic, stearic, margaric, and oxalic acids, aldehyde, actone, pepper, and living cultures of bac. coli communis, these were all found to produce a typical cirrhosis. In some instances he added alcohol to these various substances and found that the liver degeneration was delayed, the life of the animal prolonged and cirrhotic lesions less pronounced on post-mortem inspection. It is quite worthy of remark that previous to this La Fitte had experimented on thirty-four rabbits to whom for a period of time varying from four days to fifteen months, wine, alcohol, and absinthe were administered these animals presented some lesions of the liver they bore no resemblance to the so-called alcoholic atrophic cirrhosis. Hence it seems safe to infer that it is not the alcohol per se that causes the degenerative changes in the liver that we are prone to attribute to it but the irritating action of whiskey and other concentrated alcoholic beverages causing first a mucous gastritis with the formation of the various acid toxins and secondarily the well known diseases of the liver. It is plainly shown that other digestive disturbances than those caused by alcohol will produce exactly the same results. Practically this is a matter of great importance in the treatment of the insane and neurotic. In insanity a pathologic condition of the stomach almost invariably exists. If you will look care-

fully into the personal history of your patients and not bother so much about what the grandmother or grandfather's sister died of, you will find that indigestion has been a marked symptom prior to the development of the psychical disturbance. As a result of this we find a defective liver incapable of arresting the toxic products of the digestive errors and we overlook the complex classification of his mental derangement. We find we are dealing with an auto-intoxication primarily which has incidently developed the mental symptoms from which he suffers. It may also be that social and psychical causes are at the root of the gastro-hepatic disease. While Dr. Beaumont in his remarkable observations on the stomach of St. Martin describes very vividly the mucous gastritic congestion and ulceration that he always found after the old Canadian had been on a debauch, he also observed that "anger or other severe mental emotions would sometimes cause the inner or mucous coat to become morbidly red, dry, and irritable, occasioning at the same time a temporary fit of indigestion."

The *modus operandi* of the liver degeneration and subsequent auto-intoxication is as follows. A function of the liver is to reduce or oxidize toxins and either permit them to enter the circulation in a non-toxic form to be eliminated by the kidneys or to excrete them into the intestines with the bile. The formation of a larger amount of toxin than the liver is capable of acting upon or any deficiency in the chemic activity of the liver cells or imperfect elimination of bile will permit an auto-intoxication of the system. If toxins are formed in excess in the digestive tract over a considerable period of time there is produced a cell fatigue and ultimate cirrhosis of the liver causing insufficiency of that organ. Thus all the toxins produced in the intestines whether from the action of bacteria, perverted metabolism, or constipation as well as oxogenous toxins, have the effect of producing a cirrhosis and consequently insufficient hepatic function. The principal constituents of the bile are the bile salts, Taurocholate and Glycocholate of soda, the bile pigment bilirubin and cholesterin. The principal function of the bile salts is to hold in solution the cholesterin and bilirubin preventing the for-

mation of gall stones and to increase the eliminative power of the bile. In the intestine the bile acids aid materially in the saponification and absorption of fats.

The toxic effect of the bile salts when injected into the blood has been carefully studied and may be summarized as follows,

(1) Injected even in small doses into the blood stream they produce a wide spread disintegration of the red blood corpuscles with liberation of hemoglobin; brought into contact with cells of the body they cause disintegration.

(2) In small doses they increase coagulation.

(3) In large doses they arrest coagulation.

(4) In very small doses they act as vaso-dilators.

(5) In large doses as vaso-constrictors.

(6) They reduce motor and sensory irritability.

(7) They slow the heart beat by direct action on the heart muscle and Cardiac ganglia.

(8) They act on the higher cerebral centers causing coma, stupor, and death. The physiologic action of the bile salts when administered by the mouth is as follows:—

(9) They are true cholagogues, probably the only ones at our command, increasing both the solid and liquid constituents of the bile.

(10) Their presence in the blood serum (Croftin claims that they exist in the normal blood) stimulates the liver cells.

(11) They act as solvents for cholesterin and bilirubin and other substances eliminated by the bile preventing the formation of gall-stones.

The importance of a sufficiency of bile salts to the proper functioning of the liver cannot be over estimated. Without them the liver cells do not receive their normal stimulus, the toxic products of hepatic metabolism are not eliminated, cholesterin and bilirubinate of calcium are precipitated forming gall stones. Herter and Wakerlman have shown that the secretion of bile salts is reduced by an inflammation of the gall bladder whether from infection or otherwise.

Bilirubin is also toxic; formed in all probability from hemoglobin in the liver it is eliminated with the bile into the intestine,

there converted into hydrobilirubin and stercobilin, the former being partially absorbed and eliminated by the kidneys, the latter eliminated with the feces. The hydrobilirubin is further changed to urobilin in the urine. Considerable controversy exists as to whether bilirubin is only formed in the liver or in other organs as well. As bilirubin occurs in the skin pigment and in old blood clots it is probable that under certain conditions it may be formed in other organs than the liver, but it is supposed that these conditions are rare; the occasional bilirubin found in the blood may be considered as the result of defective elimination by the bile, the pigment circulating in the blood is deposited in the tissues producing icteroid discolorations; therefore the liver when stimulated to proper action removes the pigment from the blood gradually cleaning up the complexion.

The toxicity of bilirubin is undoubted, Bouchard found that four to six c. c. of bile per kilogram of animal caused death in convulsions, but that if the bile was decolorized by passing it through animal charcoal the toxicity was reduced two thirds and that the animal died in coma and not in convulsions. This result of the French scientist has not been confirmed. Bilirubin has been shown to reduce the electrical activity of muscles to a very marked degree especially the heart muscles but intravenous injections of bilirubin do not cause more than transient symptoms. The explanation of this is that the tissues rapidly fix the bilirubin thus withdrawing it from the circulation. In certain cases of neurasthenia there is an excess of bilirubin in the plasma, the quantity being sufficient to give Gmellin's reaction. Normal plasma contains a trace of bilirubin; Gmellin's reaction is positive to one in forty thousand so that a very faint trace will produce the blue ring. If the serum be diluted with twice its volume of water and the reaction is still evident it is present in pathologic quantity. The symptoms produced by cholemia are described by the patient as nervousness; there is a feeling of fatigue, inability to work, a nervous irritability accompanied with a despondency which may be so great as to become a true melancholia. The patient complains of bad digestion characterized by a feeling of heaviness in the region of the stomach

after eating, followed in an hour or two by thirst with acid eructation. There may be pains in the region of the stomach immediately after eating which cease in a few minutes, reappearing in three or four hours the patient feeling as though they were moving toward the esophagus. There may also be a sick stomach but rarely any vomiting. The appetite remains normal or may be capricious and exaggerated, rarely decreased, occasionally a true anorexia occurs. It must be borne in mind that a patient's account of what he eats is not reliable, the only way of finding out the condition of his appetite is to test his twenty-four urine for total nitrogen. Constipation is a marked symptom, often with occasional attacks of diarrhea without apparent cause, the stool being acid and burning, containing much bile and perhaps blood and mucus; the diarrhea may commence with vomiting of bile. The stomach examination shows hyperchlorhydria with excess of organic acids, occasionally hypochlorhydria, the stomach contents are thick and viscid, containing very much acid mucus, there is also excessive gas formation. Digestion appears to be rapid and complete. The pulse is normal or slow, is irregular and irritable; the mean blood pressure is high in proportion to the maximum. There is a hyperacidity of the saliva with a bitter taste in the mouth and a fetid breath. A common symptom is a reversal of temperature the maximum being at 7 A. M. and the minimum, which may be below normal at 7 P. M. Subjective temperature may occur and rarely slight intermittent fever. Epistaxis is common, hematemesis rare, retinal hemorrhage is not common, and in old patients purpura on the back of the hands is common as well as cerebral hemorrhage. The skin has a dirty yellowish hue generally termed a bilious complexion, the discoloration is most marked on the back of the hands and dorsum of the foot; the skin over the knuckles may be a normal shade or nearly so while the skin between the joints is pigmented, varying from a dirty yellow to a dark brown. Spots may occur on the palms of the hands, soles of the feet, the labia, on the face and various parts of the body. The whole skin is discolored with deeper colorations in patches.

The mental symptoms differ in each case; the prevailing con-

dition is that of melancholia, a deep despondency looking on the gloomy side of every thing, exaggerating every trifle, a fear of some undefined danger with a desire for death which may cause suicide. Hearing voices is also common, the patient may jump from the window to get away from the persecutor even without suicidal intent. From the worry and depression there is loss of weight, insomnia, and headache, the latter being usually at the vertex or occiput, the mental symptoms develop slowly and insiduously progressing to insanity. The nervous and mental symptoms of this form of neurasthenia which may become a true melancholia are undoubtedly due to hepatic insufficiency, bilirubin amia, defective metabolism or the plugging of the capillaries with mucus or obstruction of the gall ducts. Disease of the gall bladder is common in mental diseases, gall stones occurred in 26% of the women at East Michigan asylum. Almost all melancholics suffer from disease of the gall bladder and a very large percentage have gall stones while they are rarely, if ever, present in mania. The primary condition necessary for the formation of a gall stone is the absence of a sufficient quantity of bile salts to hold the cholesterin and bilirubinate of calcium in solution; the absence of the bile salts produces a hepatic stasis which is followed by chronic insufficiency causing a number of substances to be thrown back into the circulation. Cholesterin is probably non-toxic, though Flint speaks of cholesteremia as a special dyscrasia. At Mount Hope there was found excess of cholesterin in the blood in the only two cases of melancholia which were examined thoroughly for this produce.

Glycosuria from hepatic insufficiency is found occasionally in asylums, in some half dozen cases at Mount Hope, all melancholics except one who was not committed as insane but was suffering from slight mania. Two of the melancholiacs recovered, they ceased to eliminate sugar on ordinary diet, and their psychic symptoms disappeared with the sugar in the urine. In another case the sugar disappeared from the urine but the patient's mental condition was unimproved. In the other cases neither the glycosuria nor the mental symptoms were affected by the treatment. From the multiplicity of the functions of the liver it is impossible



to specify any particular form of toxemia that may result from hepatic insufficiency, but it is evident that when the organ which is the safeguard of the system against the toxins taken into the body with the food (exogenous toxins) the toxins formed in the alimentary canal (endogenous toxins) becomes diseased, reducing its chemic activity, a toxemia must result and as toxins as a rule produce their most apparent symptoms on the nervous system it follows that hepatic insufficiency is a condition demanding treatment in all cases of nervous and mental disease.

Toxins exist in the blood stream under normal conditions in small quantities, which the kidneys are able to eliminate without detriment, but if there is an excess the strain put upon the kidney causes a renal insufficiency which increases the toxemia and impairs the kidneys. It has been observed that in cases of bilirubinemia, nephritis is nearly always present, with or without albumin. In the former condition the kidney insufficiency can be detected by a careful quantitative analysis of the urine and taking the freezing point. Marked kidney insufficiency in the insane producing acute uremia is less common than would be expected. This may be explained by the nature of the toxins. The kidney may be able to eliminate the purin bodies and the inorganic cells in normal or almost normal quantities, failing to eliminate the organic toxins. The pathologic conditions produced in the liver are usually fatty degeneration occurring mostly in those cases which run a rapid course, diseases of the gall bladder atrophic cirrhosis and occasionally hypertrophic cirrhosis. In the latter conditions there is a dilatation of the portal veins which communicate with the general circulation increasing the toxemia, a great amount of portal blood passing directly into the general circulation without passing through the liver.

The treatment of these conditions presents great difficulties. Every effort should be made to trace out the source of the intoxication. Constipation should be specially combated, and particular attention must be paid to the stomach. As most of the toxins are acid or will combine with alkalies rendering them less active, alkaline treatment is indicated, care being taken to administer a sufficient amount of sodium chloride to keep up the normal

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proportion of inorganic salts in the plasma. The administration of calcium in order that the organic acids may form calcium salts which are less soluble than the alkali salts and are therefore eliminated in the feces is also of service. The administration of large quantities of water containing the inorganic salts of the plasma in proper proportion is also important, it having a tendency to dissolve the calcium salts precipitated in the arteries in arterial sclerosis and also to reduce the peripheral blood tension. The stimulation of the liver is best obtained by the administration of the bimodide of mercury in small doses combined with sodium glycocholate mass. The latter when administered per os is absorbed from the intestine, passing into the liver it stimulates the cells, at the same time dissolving the accumulated metabolic products, producing a free flow of bile into the intestines. Under its use the icteroid discoloration of the skin disappears and in many cases the constipation is relieved.

Hepatic insufficiency, combined as it often is with renal insufficiency, causes a retention of substances which are normally transferred and eliminated; the action of these substances upon the cells of the nervous system is to modify the metabolism. Where the intoxication is slight and transitory the symptoms produced do not permanently affect the cellular functions, but if the action is intensified and prolonged, the functional disturbance becomes accentuated, definite, and permanent, as shown by the changed form and chemical reaction of the cells. The genesis of auto-intoxication of the cells of the nervous system is complicated, but may be illustrated by the simple toxemias, such as those of alcohol, morphine, cocain, and cannabis indica, which produce delusions, hallucinations, and illusions closely resembling in some cases those of the chronic insane. A more perfect simulation of mania can hardly be imagined than that of a person thoroughly under the influence of cocaine. The insensibility to pain, volubility, the disconnected conversation, the rapidity of thought, the indifference to environment, and the psychic well being form a complete picture of mania. This transient mental derangement differs from the insanities, as a rule, only in the character and source of the toxin or intoxicant. In

one case it is introduced as a finished product into the tissues of the individual, produces effect and is eliminated, and when not repeated leaves the nervous system in its normal condition. In the other case, when the result of some gastro-intestinal or hepatic defect, it is continuously formed flowing into the blood as rapidly as it is eliminated and the organic cells and the nerve cells are slowly and insiduously poisoned until they are beyond the possibility of restoration.

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### *Abstracts.*

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#### THE TREATMENT OF NIGHT SWEATS IN PHTHISIS.

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BY DR. WILKE, OF BERLIN.

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THE old remedies for nocturnal sweats in phthisis act only symptomatically. Since the sweats must be regarded as a bio-chemic reaction of the organism against the invasion of the blood stream by toxic substances, a causal remedy must be able to depoison the bacterial toxins and thus remove the entire symptom-complex,—the chills in the afternoon, the evening fever, and the night perspiration. *A priori*, such an effect is to be anticipated from collargolum, as it has been shown that it acts catalytically on bacterial products.

Five phthisis patients in the second stage, with severe cough, muco-purulent expectoration, and heavy night sweats, four of whom had moderate or high fever, received a tablespoonful of a one per cent. collargolum solution four times daily. After the use of one half dram collargolum, fever and sweats disappeared and have not returned to this date, two months later. The importance of this result with reference to nutrition and strength is evident. When severe enteritis hinders absorption, inunction or intravenous injection of collargolum is preferable to its use by mouth. Collargolum does not act upon localized pus foci; therefore its use also has diagnostic value.

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In a paper read before the San Angelo District Medical Association (*Texas State Journal of Medicine*, March, 1907), Dr. I. L. Van Zandt of Fort Worth reviews some of the publications on collargol and records his own experience with it in septicemia, scarlatina, phlebitis, erysipelas, bubo, paronychia, acute salpingitis, and exacerbations. He also gave it in thirteen cases of typhoid fever, with an average of 19.8 days from the first to the last visit. This includes one with intercurrent pneumonia and two who suffered a set-back from excitement and overeating. In two cases the temperature had fallen to 99°; when the remedy was discontinued, the temperature remained stationary for a few days and then again rose till collargol was resumed, whereupon fever disappeared in three days. In most cases there was marked improvement with general well-being in two or three days after beginning the treatment, the fever sometimes coming to a very abrupt termination.

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## Selected Articles

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### DANGER SIGNALS FROM THE SKIN.\*

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BY L. DUNCAN BULKLEY, A. M., M. D., PHYSICIAN TO THE NEW YORK SKIN AND CANCER HOSPITAL, CONSULTING PHYSICIAN TO THE NEW YORK HOSPITAL, ETC.,  
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WHETHER wittingly or not, the skin receives a good deal of attention from the general practitioner in connection with many disordered or diseased conditions. Among these may be mentioned the hot, dry surface belonging to fever, or the cold, clammy condition, in some phases of grip, the hot flashes at the menopause, or the abundant perspiration of phthisis, etc., and every one recognizes the ruddy, clear skin of perfect health as con-

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\* Read before the Medical Society of the State of New York, January 29, 1907.

trasted with the sallow, pasty skin of advanced kidney disease, the yellow skin of jaundice, and the dry, scaly skin of glycosuria, etc. One need only mention the exanthemata to suggest that the phenomena of the skin may be but one evidence of disease, which is also shown strikingly in the case of syphilis and leprosy.

Further, the condition of the skin and its appendages both in men and animals is continually taken as an index of the state of the general system, and, as we know, may often serve as a valuable index as to how metabolism and nutrition are performed. The cachexia of anemia and of malignant disease is often surely shown by the skin, as is also that of functional or organic disturbance in many organs.

And yet when the skin itself becomes diseased many physicians seem to lose sight of its relations to the general system, and regard and treat it only locally; and this sometimes happens much to the detriment of the patient, and too frequently with unsatisfactory results in regard to the cutaneous affection, as I have so constantly tried to show in my lectures.

Although we may not all recognize it, nor be conscious of it, the skin continually plays a most important part in health, especially in the direction of regulating the heat of the body. The everyday observation of the effects of a chilling of the surface, resulting in many internal diseases, emphasizes the importance of the skin as a vital organ, while the effects of extensive cutaneous burns, producing profound shock, and often attended with ulceration of the intestine and suppression of urine, and which are also often frequently followed by death, show that the skin has vital relations with the rest of the body, which are of the greatest importance.

Another illustration of the relation of the skin to the rest of the economy is found in the influence of the menstrual function on certain diseases of the skin, of which very abundant proof exists in literature,\* and of which many of you have undoubtedly seen more or less striking examples.

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\* Bulkley: "The Relation of Diseases of the Skin to Internal Disorders." Rebman Co., 1906.

\* Bulkley: "The Influence of the Menstrual Function on Certain Diseases of the Skin." Rebman Co., 1906.

Recognizing then, from what has already been said, that the skin is not to be regarded as simply the outer covering of the body, to protect the surface and to give beauty and symmetry, but that it is a vast organ of elimination, intimately connected, through its enormous nervous distribution, with all the rest of the economy, we will consider some of the ways in which manifestations of disease on the cutaneous surface may act as "Danger Signals" in regard to the life and health of the individual affected; also the manner in which the warnings should be heeded and properly acted upon.

It must, however, be clearly stated here, once for all, that none of this danger consists in the possibility of any eruption "striking in"—as is so popularly feared—for there is absolutely no danger in removing any ordinary cutaneous affection as quickly as possible. To show how strongly this absurd fear had formerly taken possession of both the profession and the laity, I mention that I have in my library an old German book of some size, with the title "On the danger of driving in the itch," or scabies! It is well for all that such ideas are now pretty much a thing of the past.

Undoubtedly many of us have seen serious consequences ensue when the eruption of scarlet fever or measles has suddenly faded during its height, but, as all know, this is rather the *effect* of an intercurrent disease than the *cause* of the same, even as some of the ordinary skin affections fade greatly or even disappear when there is active disease of internal organs; and it is this observation which in the past has given rise to the unreasonable supposition that a skin disease has "struck in." We now recognize that there is no such thing as an active agent, or "demon of disease," affecting the skin, which can travel here and there, but that what we call disease consists in the wrong action of the integral parts of an organism.

But, on the other hand, it is equally true, as I shall hope to show, that there sometimes is danger from neglecting to heed the warning which the skin manifestation often gives of something else more seriously wrong in other organs, or in the system at large, or in the diet, hygiene, and mode of life of the patient, and

in seeking to remove the danger signal, perhaps by local means only, while the real difficulty is left untouched. It is about as sensible as it would be to remove the objectionable red light or flag placed before an open draw-bridge or a misplaced switch, without first seeing that all was safe for an approaching train. The absurdity of such a course medically would be at once apparent if one should devote all their energies to the eruption, in scarlet fever, measles, or small pox, or in syphilis and leprosy sole attention should be paid to the local phenomena.

And yet this is what is too often done in regard to the ordinary affections of the skin, largely from the failure to appreciate fully the relations of many diseases of the skin with internal disorders, or the true significance of many of the lesions on the cutaneous surface. We will now examine the matter referred to a little more in detail, and try to see in what respect some of the conditions more commonly recognized as "diseases of the skin," in even a considerable proportion of cases, have relations which may with propriety be called "Danger Signals."

1. *Syphilis*.—Beginning with syphilis, we all know that this disease, which is principally recognized through its manifestations on the skin, is a serious affair, caused by an active poison, liable to affect, and probably affecting, to a greater or less degree, every organ of the body; we also know that while its virulence is especially active during the first year or two, its malignant influence may extend over a life-time and be transmitted to posterity. We know, also, that when inefficiently treated it may be the cause of most serious lesions in many organs, through which it may bring lamentable disaster, or death. And yet my experience leads me to believe that the profession at large does not fully and adequately appreciate the danger; or at least, that patients are not sufficiently warned of it, and made to appreciate the fact strongly enough to take efficient measures to prevent these rather frequent occurrences.

Twenty-five years ago I read a paper before the New York State Medical Society, regarding "The Malignancy of Syphilis,"\* based on a study of 450 cases of the disease, setting forth many

\* Transactions of the New York State Medical Society, 1882.

instances of the dire effects, with some deaths from this malady. Although, owing to a more enlightened profession and public, resulting in better and more prolonged treatment, as generally employed since that time, there are probably now not the same proportion of cases exhibiting severe and dangerous lesions of many organs as formerly; still daily observation and the records of literature show that as a disease, syphilis still makes frightful ravages into the health and life of the community.

The time limits do not permit of great elaboration on separate subjects, much less the report of many illustrative cases, but the importance of syphilis as a disease, whose possible outcome under unfavorable circumstances can result most disastrously, cannot be overestimated, and must be briefly considered.

The danger signal from the skin, in syphilis, should therefore never be neglected, for the knowledge given thereby may often prove to be the key to many subsequent difficulties. Both in the early and in the late stages of the disease there are dangers to almost every organ of the body, as all know, and the knowledge of previous syphilitic infection, if rightly acted on, may often influence favorably disease-processes of a most threatening character. Many cases of incipient locomotor ataxia can be checked, many cases of chloriditis which would end in blindness can be controlled, many cases of brain tumor can be cured, the various woeful results of syphilitic endarteritis can be averted, and also disease of the heart, liver, and kidneys can be restrained, by prompt and vigorous treatment based on a recognition of a syphilitic cause, as I myself have repeatedly witnessed.

I cannot detain you to cite illustrations of many of them, but must emphasize what I have said by one or two examples.

Some time ago I treated a gentleman aged 44, of this city, for an old syphilide of the palm, and the condition yielded well, and I lost sight of him. A year or so later he came to me complaining of dimness of vision, and I referred him to a prominent oculist, supposing that he needed glasses; my attention not having been specially directed to ocular troubles connected with syphilis, I did not then connect his with the disease. Just about one year later I met him casually in a street car, and inquired as to

his vision. He said that it was worse and worse, that he had lost the sight of the right eye entirely, and could hardly see with the left. Remembering the nature of his former trouble, I hastily told him to call on me at once. We went together to see a gentleman who had made some special studies in syphilis of the eye, and on ophthalmoscopic examination the fundus of both eyes were found to be the seat of extensive choroiditis which had quite destroyed the vision of the right eye, and had advanced considerably in the left. By very active treatment the process in the left eye was arrested and a good measure of vision restored. I have seen other somewhat similar cases, and some years ago Mr. Jonathan Hutchinson, of London, kindly collected and demonstrated to me a considerable number of cases, in children and young adults, where the choroid was more or less severely affected in those with hereditary syphilis.

Not very long ago a gentleman, aged 48, with very large and important business interests, consulted me from a western city, who also had a late syphilide of the palm. He complained at the same time of a dulling and blunting of his mental powers, which quite incapacitated him from work. Remaining in this city for a while the mental condition improved strikingly, as he was put on a very active antisyphilitic treatment for his palmar trouble, and he went home with the latter also much benefited. Neglecting treatment somewhat at home, he returned in much the same state as before, and again everything cleared up under active specific treatment. It was difficult to impress upon him the gravity of the situation, and as the eruption on the palms entirely disappeared he again neglected treatment, and within about a year I learned that he had died at home from some obscure brain disease. There could be no question but that his mental trouble was due to a syphilitic endarteritis, which could have been prevented by an efficient and prolonged proper treatment. But, as a very intelligent patient remarked to me recently, in discussing the subject of this lecture, in the rapid curing of the palm he lost the "Danger Signal," which if properly heeded would certainly have prolonged his life, and I in a distant city could not help it.



If time permitted I could give many very interesting cases where some of the severe ravages of syphilis were arrested by efficient proper treatment, such as incipient locomotor ataxia, one of an enormous tumor of the liver, diagnosed as cancer, which subsided under specific treatment, hemiplegia in a young subject with severe syphilis, which yielded rapidly and perfectly to treatment for the disease, etc., etc. In one case a gentleman who was sent to me solely for the treatment of alopecia, whose syphilitic nature had not been suspected, very severe general syphilis followed, exhibiting dangerous brain symptoms at one period.

But all these things are a matter of common knowledge, abundantly illustrated in literature, and yet somehow they often fail of application in actual practice; for there are many now helpless from the destructive results of late locomotor ataxia, and many who have suffered from serious lesions of various important organs, and many who have died from obscure disease of the brain, etc., in whom the processes could have been prevented or checked if only the danger signal had been recognized and properly acted upon sufficiently early. All this must be my apology for presenting so at length matters which must be familiar to many of you.

How inexcusable, therefore, it is for a physician to treat infection with syphilis as a light matter, and not to thoroughly warn, or, if necessary, to frighten the patient into a proper caring for the treatment of the disease until it is perfectly cured! Many of us who know syphilis feel that such brief, violent treatment as is often given at various mineral springs is responsible for much of this ultimate harm; for by leading patients to believe that they have had a "cure," they are too often led thereafter to neglect all remedial measures until, perhaps, some obscure internal result of the infection has progressed beyond the power of relief.

Innocent syphilitic infection, which may occur in a thousand different ways,\* should never be forgotten, and when the danger flag is distinctly recognized on the skin the warning should be given and heeded quite as much as when the patient acknowledges a sexual transgression. Indeed the ill omen should be even more strongly regarded, for all who have seen much of the extra-

\* Bulkley: "Syphilis in the Innocent," New York, 1894.

genital chancres agree that these cases often prove the most serious, as regards some of the later harmful effects of the poison, as I have repeatedly myself observed. No very satisfactory reason of this has been given, but it is possible because generally in these cases the disease has lasted some time and has thus profoundly affected various organs before its true nature has been demonstrated and proper remedial measures employed. The same is equally true in regard to marital and hereditary syphilis.

2. *Eczema*.—While eczema is so often regarded and too frequently treated as a wholly local disease of the skin, often without success, in certain cases it gives signals of danger of no uncertain character; these if heeded, and if the proper measures are taken, will result to the best interests of the patient, as well as to the cure of the disease, but if disregarded they may result most disastrously.

Generalized eczema, or that affecting many localities, is almost always a sign of nervous or physical breakdown, and a most careful study of the patient in every respect will commonly reveal gross errors of life or habits, which, if unchecked, will yield to direful results. Of this I could cite to you numberless examples, both of patients in whom the most careful general measures and regulation of the diet, mode of life, etc., has been followed by a perfect restoration of health and nervous vitality, and of others, in whom a neglect of the proper measures and precautions had resulted in a general nervous and physical breakdown, so-called nervous prostration, which had entirely crippled the patient's usefulness.

Localized neurotic eczema \* of the hands or about the mouth will also often indicate a nervous strain under which the patient may succumb, unless it is promptly and properly attended to by heeding and wisely acting on the danger signal given; eczema about the eyes is sometimes dependent upon eyestrain or errors of accommodation calling for special attention and requiring special skill in relieving. How futile and unwise it is, therefore, to regard the skin alone as at fault in such cases as this; and how

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\* Bulkley: "Neurotic Eczema." *The Medical News*, Philadelphia, Jan. 13 and Feb. 7, 1891.

wrong it is for the one who is consulted in regard to the skin trouble (which may seem of the greatest importance in the eyes of the patient) not to look further, and to give the patient the benefit of a wider knowledge, and by directing him how to heed the danger signal, to enable him to reap the greatest benefit from the consultation!

But eczema is also not infrequently met with in those of a full, plethoric habit, with a hard, bounding pulse, showing metabolic errors which may lead to kidney or other disease, and even to apoplexy, if not controlled by proper measures. Again, many cases exhibit a weak, flabby pulse, indicating anemia, or a greatly debilitated state of the system, ready to take on other diseases of any organ, unless restored to a normal vigor by appropriate treatment, perhaps of the most varied kind. All of this I could illustrate by innumerable examples, did time permit, but I think that you are willing to accept my assertions based on experience, without further proof.

We see thus, that eczema may sometimes prove to be a blessing in disguise, if its danger signals are recognized, properly regarded, and correctly interpreted and managed.

3. *Acne*.—Many look upon acne as only an unpleasant accident, annoying to young persons and hardly meriting much careful professional attention. But acne often presents danger signals which it is not wise to ignore.

Acne is continually seen to be the sign of grave metabolic disturbances, often dependent upon gross errors of diet and hygiene, and frequently associated with constipation or intestinal and gastric disorders, which may lead to serious consequences if unchecked. In many instances it is due almost wholly to anemia, and is often one of the first signs of breakdown from overstudy and confinement, or very commonly from a combination of these with society dissipation.

The cold and clammy condition of the hands and feet so constantly observed in young persons with acne is surely an indication of something wrong, which should be attended to by the physician called upon to relieve the annoying eruption on the face. A neglect of the many co-ordinate symptoms continually occur-

ing in patients with acne is responsible for much of the supposed rebelliousness of the disease.

The relations of the eruption of acne to the menstrual function \* should certainly direct attention away from a purely local consideration of the eruption — for almost every woman affected will tell you that time and again she can predict the approach of menstruation by the occurrence of fresh lesions on the face. Many years ago the late Dr. Peaslee of New York, in discussing a paper on acne by the present writer, declared that whenever he found an excessive amount of acne on the chin he looked for and generally found some disorder of the sexual apparatus, an observation which I have verified very frequently.

Finally, all know that acne in older persons commonly indicates some internal disorder, often due to gross errors in eating and drinking, so much so that a red nose and face invariably suggests to the ordinary mind a greater or less indulgence in alcoholic beverages. When this danger signal has been rightly appreciated by the physician and sufficiently urged, the patient has frequently been led to a reform which ultimately proves to the greatest possible advantage in many ways.

It is seen, therefore, that acne in many classes of cases, instead of being only a local disfigurement may often, by the danger signal which it so plainly presents, prove to be of the greatest benefit to the patient, if only the physician will fully grasp the idea and act intelligently and energetically in the right direction. One continually sees patients with acne who should certainly be under competent medical care in order to prevent a breakdown, but who could not be induced to follow out proper treatment and to change their mode of living until inspired to do so by the stimulus of an annoying eruption which they desired to be free from.

4. *Psoriasis*.— This disease is sometimes erroneously called the eruption of health, because, to a superficial observer, so many patients afflicted with it appear to be healthy. But sufficiently minute and prolonged study of many cases, over periods of time,

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\* Bulkley: "The Influence of the Menstrual Function on Certain Diseases of the Skin." Rebman Co., 1906.

#### SELECTED ARTICLES.

covering many relapses, will certainly show the case, and continually the appearance of the danger signal which it is well to heed and and again it can be observed that a recurrence has followed some great nervous strain or it returns with the prostration of nursing the eruption may disappear on the outset it is constantly seen to occur for the first time after debilitating illness. Of these facts I could give a number of illustrations, as also of the great benefit derived to the patient when full internal treatment is given with this understanding.

Urinary warnings of psoriasis are also very common. In the recently a long standing psoriasis led me to suspect urinary insufficiency in a lady who otherwise was in perfect health. Although weighing only 100 lbs. times passed only from seven to eleven ounces in the twenty-four hours, and later I learned that she had recently had a serious operation on the urinary tract where she lived. She had had the pyelitis, and if the renal insufficiency had been the cause, she would probably have escaped the danger. In another recent case a young lady, who has had psoriasis for eight years, voids enormous amounts of urine with great urgency, and again she will have a very scanty urine with a specific gravity of 1.041 (no sugar) and an acidity, as measured, four times the normal degree, and with 4.3 per cent. or double the normal amount. Surely the psoriasis is a toxinolism manifested in these patients must be due to the general economy. And these illustrations are multiplied many times from my experience.

Even psoriasis may present danger signals which attend to.

*Chronic Urticaria.*—While acute attacks of urticaria are not infrequently complicated by ptomaine poisoning, which may call for special treatment, in its chronic form it frequently shows the

of faulty metabolism and intestinal indigestion and fermentation, which if unchecked will certainly have other prejudicial effects on the system. Time does not allow of any full consideration of these ill effects now, but the experience of every one shows that when these errors of intestinal action persist for a length of time they are likely to result in more serious disturbances, with insomnia, which may lead to a nervous breakdown.

The occurrence of chronic urticaria may, therefore, be the means of averting greater trouble, if its danger signal is heeded and proper treatment instituted.

6. *Erythema Multiforme* and bullous eruptions.—Like urticaria these are but the outer warning that more or less serious metabolic changes of a faulty nature are taking place in the system, with auto-intoxication. Occasionally there will be a hard, bounding pulse, indicating high arterial tension, calling for relief by dietary and medicinal measures in order to prevent more serious damage to other organs. Of this I could give you a number of very striking illustrations.

7. *Pruritus*.—Severe general or localized pruritus, like neuralgia in many instances, is very frequently but a nerve-cry, or danger signal, telling of a lowered nerve vitality. We all know of the great difficulty in relieving some cases, and how utterly ineffective local treatment often is in averting some forms of itching. If the nerve warning is not rightly heeded and properly acted upon not only does the cutaneous distress persist, but the patient suffers from more serious effects of nerve exhaustion. This is particularly true in regard to pruritus of the anal and genital region, which will sometimes quite incapacitate a person from serious work, as I have repeatedly observed. I have just now in mind an active lawyer who continually speaks of the suffering as "simply awful," when he is under nervous strain, in whom it has been very difficult to restore balance to his nervous system.

8. *Xanthoma Diabeticorum*.—This rather rare eruption has repeatedly called serious attention to a diabetes, which had perhaps long existed, but which either had not been recognized or had been neglected until the skin gave the danger signal

which induced the patient to consult a physician. Successful treatment of the eruption can only be accomplished by the proper care of the glycosuric condition; thus the eruption may prove a blessing in disguise by the warning it presents, if this is recognized and exactly proper measures are faithfully carried out.

9. *Boils and Carbuncles*.—These are too often regarded and treated simply as local affairs, often to the great detriment of the patient. While it is true that the presence of pus (especially in external regions) indicates the action of pus cocci, we know, from the almost omnipresent existence of these micro-organisms, that there must be some other cause determining their activity in particular persons and localities; we know that micro-organisms cannot be cultivated on unsuitable media, or under unfavorable conditions. Thus, the recurrence of boils and carbuncles is continually found to indicate the existence of a lowered vitality of system, and in many persons also the presence of glycosuria; and the danger signal should be attended to, and all these conditions rectified, as far as possible, if the best interests of the patient are to be served, and later, even more serious trouble avoided.

10. *Dermatitis maligna*, or *Paget's disease* of the breast, should always excite serious attention, because of its liability, or indeed, probability, of being associated with cancer of the mammary gland. In a large share of cases it is useless, if not wrong, to neglect this danger on the skin, and by too often futile attempts to heal it by local treatment to allow the time to pass when a complete removal of the entire breast and glands by surgery would offer the best prospect of a radical cure of the cancerous disease.

11. *Acanthosis nigricans*, with *multiple capillary angiomata*.—The attention of the profession has been again called, by Dr. Willy Meyer,\* to the importance of this condition, when existing on the abdomen, as a sign of cancer of some abdominal organ; which is only another instance of the skin exhibiting a danger signal.

\* Meyer: *Trans. Amer. Surg. Assoc.*, 1896.

12. *Lupus Vulgaris*.— While in the majority of instances lupus remains a local manifestation of tuberculosis of the skin, it is not at all uncommon for it to be associated with tubercular trouble of other organs, notably the lungs, which danger signal should never be neglected in severe or protracted cases. While general treatment may not have an immediate or striking curative effect on the eruption, it can aid in a certain degree, so that local measures will prove more permanently effective, and it can guard the system against the attack of other organs by the tubercle bacilli or their toxins.

The limits of this lecture prevent the full consideration which might be given to these and many more manifestations on the skin which have constitutional or other relations, and which might well be regarded as exhibiting danger signals not to be neglected. I want, however, to briefly mention a few more which have occurred to me; doubtless many more illustrations could be secured with yet more careful attention. In regard to some of these now to be mentioned the connection is, of course, well known and commonly recognized.

13. *Purpura rheumatica* and *erythema nodosum* are constantly recognized as dependent upon a rheumatic condition, and although at the time this may not be very pronounced, they should always be heeded as danger signals by the physician and patient. Proper dietary and other anti-rheumatic treatment, indicated by this warning, may save the patient from more serious trouble with the joints, heart, etc.

14. *Petechial* and *erythematous rashes* are not infrequently accompaniments of malignant endocarditis, and may occur in connection with septicemia and pyemia. Their presence, as is well known, is often of serious significance.

15. *Purpuric lesions* are well recognized to be an important symptom in epidemic cerebro-spinal meningitis, whence its name, spotted fever.

16. *Rose spots*, especially on the abdomen, have long been received as a special sign of value in typhoid fever. The eruption belonging to typhus fever may also be mentioned, which often forms an important part in the diagnosis. The significance



of the rash in the exanthemata and its relation to other symptoms are too familiar to require mention.

17. *Pigmentary alterations* of the skin may often be of the greatest significance in relation to a number of diseases; in Addison's disease it is generally the first symptom to attract attention. In this connection it may be mentioned that *myxedema* is largely recognized by its manifestations in the skin and subcutaneous tissue.

18. *Sweating and Flushing of the skin* are frequent accompaniments of the menopause, and are frequently the first or principal symptoms to direct the patient to seek medical aid; if these danger signals are properly heeded, and proper care be given to the patient in every respect; further trouble can often be avoided.

19. *Dermatitis medicamentosa*.—Finally there are certain eruptions of varied character which occur on the skin wholly from the internal administration of many drugs, in those who have some peculiar idiosyncrasies. If this warning is heeded and acted upon the eruption commonly ceases soon after the cessation of the use of the drug, without further trouble; when the drug is persisted in other unpleasant symptoms may follow.

In our study of some of what I have designated "Danger Signals from the Skin," we have seen that the skin is not to be regarded as merely an outer covering for the body, but that it is a most important organ having vital relations with many parts of the economy.

Danger signals may vary very greatly in their importance: from one placed before an open drawbridge, to one warning of a rough road or a steep hill for a bicycle, or a sign on a sidewalk in front of a building being torn down. But any one of them may be of serious import under certain circumstances and according to the attention paid to it, and the measures taken to avoid any possible harm or inconvenience. It is in this light that I have put together the suggestions I have here made; all of them are naturally not equally important.

But from what has been said we have seen that the skin frequently exhibits manifestations on its surface which, while

they may not have resulted wholly from the various internal conditions mentioned, are often related to them in such a close and intimate manner that they may well be regarded as indications, or as I have called them, warnings or danger signals, of other and more serious disease. We have seen that there are many so-called "diseases of the skin" which have internal relations which it is well to study patiently, interpret accurately, heed carefully, and treat very intelligently, in order both to effect a cure of the cutaneous lesion and to serve the best interests of the patient, very often in warding off more serious affections of other organs.

He, therefore, but poorly serves his patient who hastily regards only what may be seen on the skin (or too often only a part of that), and gives some local application, without realizing the significance and true cause of what is often a signal flag of danger which nature kindly places in full sight for his aid; and recognizing it he should act wisely and intelligently thereon.

— *N. Y. State Jour. of Med.*

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### *Editorial.*

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#### THE ATLANTIC CITY MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

THE American Medical Association has held its fifty-eighth annual session. The meeting was, as might have been expected, a large one, though not as large as the preceding one at Boston last year. As a matter of course, such an association could only do good work, so far as the scientific part is to be considered. Our limited space will not permit our going into this part of the work of the Association, and the *Association Journal* will bring all that out.

However, certain "ring principles" that have governed the Association for some years past, have yet held sway. The work of the "House of Delegates," was, as we have learned, very *harmonious!* Ah there? Yes, Ah There! When the Association in its legislative work is controlled by the "House of Delegates," this "H. of D." controlled by the "Board of Trustees," and the "B. of T." is controlled by a majority of five out of nine and that five controlled by the Secretary—Editor, it

has come to a pretty pass indeed, that the "Organized Body of American Medical Men" is on a way to DISORGANIZATION, unless the Medical Men of America take positive action as to who shall be their REPRESENTATIVES.

Well, we shall see what we shall see. The day certainly will come when honest men can come to their own. The Association is now, and has been for some time, in the hands of those who have only had their own advancement and profit before them. The Association for many years only looked to the good of the regular members of the Medical profession, and the good of their constituents. But it has fallen into the hands of a "RING"—yes, a MACHINE OF GRAFT.

Well, we are not going to waste time now in going into this matter; but if thinking men will only look at the report of the "Board of Trustees," as published in the *Jour. A. M. A.*, June 8, 1907, and will carefully consider the figures as so plausibly laid down by the "B. of T.," look carefully over the various items of that report, they may and will, if they will only read between the lines, find many, yes, very many "little things"—but it is of the little things that great masses are made. However, we will pass over this for the present, but we have our eyes wide open, and we hope to let a little light into the optics of the masses of the American medical men in the days before us.

Well, the Association will meet next year in Chicago. Yes, in Chicago, a city made great by Nathan S. Davis, the Father of the Association; a city in which John Hollister lived and died; a city in which John B. Hamilton did such a work for the Association.

The President-Elect is one Herbert L. Burrell, born in the city of Boston in 1856, graduating at Harvard University in 1879, now Professor of Clinical Surgery in Harvard University Medical School. So much to his credit. He was Chairman of the Committee of Arrangements at the Boston meeting last year, and evidently ENDEARED himself to the "RING." So much for the glories of personal popularity that knows just "how to pick a winner." Dr. Burrell no doubt will do all that will be expected of him; but then "CAN HE DELIVER THE GOODS?" "*Quien sabe?*"

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#### ANNUAL COMMENCEMENT EXERCISES OF THE CHATTANOOGA MEDICAL COLLEGE.

On the evening of Monday, April 29, at the Opera House in Chattanooga, in the presence of a large and appreciative audience composed of the most refined, educated, and elite citizens—male and female—for the harsher element was in attendance as well as the better halves of the World; yes, a magnificent audience of the citizens of this grand city nestling below the shadows of "Lookout" showed that they appreciated

the work that was being done in their city in behalf of Medical Education, by being present at the annual commencement exercises of the Medical Department of Grant University—The Chattanooga Medical College.

The Opera House interior was decorated most profusely and artistically with the college colors. On the stage were seated members of the college faculty, President Race, Dean W. S. Bovard of the Divinity College, and the speakers. The program opened with music by a brass band. Then followed the invocation by Dean Bovard—a feeling, earnest prayer for the success of the occasion, the progress of the university, and especially the Medical College, and for the right and prosperous lives of the members of the graduating class.

The Dean of the Medical Department, Dr. Rathmell, made a most excellent address to the graduates, and among other statements of virile strength, said that "to expose error and discover new truth" is the watchword of this institution. "The practice of medicine," he said, "is not a business nor a trade—it is a profession. Medicine itself is a science, while the profession of it is an art. There was a time when the art was supreme; but to-day the science has overtaken the art, and both now are moving side by side." Speaking of the advancements made in the standards of requirements for the study of medicine, Dean Rathmell said: "Not long ago, any one with or without education could begin a profession; but now to enter a profession a young man must have a good preliminary education. . . . He must have secured an amount of general knowledge that has generated in himself a desire for more—which, in turn, will urge him to augment the acquisition, thus increasing his ability to learn and to retain learning. Until this state of things exists in a young man's mind, he will find himself handicapped all through life in a profession."

Turning to the large audience, Dr. Rathmell then concluded his remarks with the following:—

"Parents, 'it is up to you' to see that your sons go through with a high school course, and, if possible, a university, in order to be prepared for any profession. A medical college curriculum does not give scholastic education; but its purpose is to fit the student for the pursuit of medical science and art. You prepare him first along these lines and send him to us, and we will round him out as a physician and a man. Our purpose is to make him scientific, but not less human; to make his conscience more tender, not to destroy it. We shall teach him to stand always for the honor and dignity of the profession, always teaching that self-interest, expediency, or any other motive must not influence his judgment or action against the best interest of his patient. We are proud to say that such teachings and efforts for four years are crystallized in this class of thirty-seven stalwart young men from all over this land who are here to-night to receive the honorable degree of Doctor of Medicine. We trust that our endeavors have not been in vain."

A beautiful musical rendition then followed by the orchestra, and Hon. H. Clay Evans was then presented and delivered the "Commencement Address." Well, it was done as only this great son of Chattanooga could do. We will not attempt to abstract or extract from his address but will simply say that it was a credit to him, a credit to the city in which he resides, and was of very material value to the young graduates of Chattanooga's Medical College.

He impressed upon the graduates the duty lying upon each and all to maintain by their lives and labors the good name of the college which sends them forth. Yet we must quote from him a little.

"No other profession," he asserted, "has made so great progress in the last half century as the profession of medicine. Many successes attained to-day by physicians and surgeons might have been regarded as miracles two thousand years ago. After the civil war, they used to tell us, surgery as a successful science would go backward. But the course of that science has been still onward." And he sought to enforce upon his hearers of the graduating class the fact that still greater progress lies in the future; and it might be in the power of these very young men to participate in securing that progress.

Mr. Evans dwelt at some length upon the wonderful successes attained, within a comparatively short time, in the treatment of some of the worst diseases which curse the human race. He described the differences in temperament and methods which enable some students to make rapid progress, while others, working much harder, find it difficult to keep their places in class. He illustrated this point by anecdotes, which called out applause, concerning men from West Point and Annapolis who had made seeming failures in studies, but who in after life achieved great success and renown. He told a story of his meeting with John D. Rockefeller, and hearing him tell of his early struggles and his difficulties in securing a loan of \$2,000 with which to begin business. And not one of the young men before him, he said, would exchange his diploma for the amount of money which Rockefeller sought as a foundation for his present mighty fortune. Mr. Evans closed by adjuring his hearers to honesty of purpose, integrity of character, unremitting labor, and keeping consciences clean and clear. He expressed hearty good wishes for the success of the graduates and closed amid great applause and appropriate musical suggestions from the young men in the gallery.

S. E. Holtzclaw, of South Carolina, was then introduced to deliver the class valedictory. He gave expression of the feelings of the entire class toward the college and the instructors under whom the work had been done, which resulted in the granting of the diplomas of the evening. His farewell to class mates was in language which produced manifest effect upon them all. His tribute to the profession upon which they were about to enter abounded in eloquence of language and was marked by

most impressive delivery. One old veteran, who had listened to scores of student orations, said after the close, "It was the best I ever heard." Mr. Holtzclaw's address was followed by immense and long-continued applause, led by his classmates, in which the whole audience joined.

The brief faculty address was delivered by Prof. G. Manning Ellis, a tribute from the faculty and officials of the college and of the university to the graduates and expression of good wishes for the success of all. Prof. W. G. Bogardt, secretary of the faculty, then called the roll of the graduating class. Each in turn responded by rising and remaining standing.

The names and addresses of the graduates are as follows:—

William Lawrence Bailey, Laurens, S. C.; George Thomas Banks, Ludville, Ga.; Grover Cleveland Bigham, Forestville, S. C.; Arlanthus Blakeney, Kennedy, Ala.; Atticus Gynne Blanton, Haleyville, Ala.; Newburn Brown Burchfield, Kellerman, Ala.; Marion LaFayette Clayton, Sylvania, Ala.; John Robert Collins, Culberson, N. C.; Berry Tribune Crofts, Tellico Plains, Tenn.; Murdoch Lee Crum, Plant City, Fla.; Frank Galoway Gaines, Crossville, Ala.; William Simeon Hansard, Henegegar, Ala.; James Samuel Harmon, Riddle, Ala.; Carl Henry, Maryville, Tenn.; Samuel Eugene Holtzclaw, Greers, S. C.; Archie William Horton, Meltonsville, Ala.; Eddie Isaac Alvin Jeffers, Baileyton, Tenn.; Barclay Joshua Jones, Maryville, Tenn.; William Henry Kingman, Brooklyn, N. Y.; Reuben Nicholas Lee, Chattanooga, Tenn.; Homer Clay Manning, Williamsburg, Ky.; George Brady Miller, Stephenville, Texas; Harry Olen Null, Highland Park, Tenn.; James Clyde Overall, Liberty, Tenn.; Noah Samuel Richie, Soddy, Tenn.; William Wylie Scott, Cross Creek, Pa.; Robert Lee Shuler, Comer's Rock, Va.; Edward Franklin Stephens, Pine Knot, Ky.; Fred Green Stone, Tupelo, Miss.; John Wesley Snow, Drifton, Ala.; John Stephen Tillman, Clio, Ala.; James Edwin Watkins, Lucknow, S. C.; James Meek Wolfe, Seven Mile Ford, Va.; John Reedie Wood, Rockford, Va.; Alexander Arthur York, Linwood, N. C.

Prof G. A. Baxter gave a very brief address to the class, the members of which were then grouped on the stage, on "Ethics." President Rice of the university presented the diplomas and closed the exercises with the benediction. Members of the graduating class shook hands with each other, with the college faculty and speakers of the occasion, and then separated—to go out into the world and take up the practice of medicine, all carrying with them the best wishes of the large and enthusiastic audience.

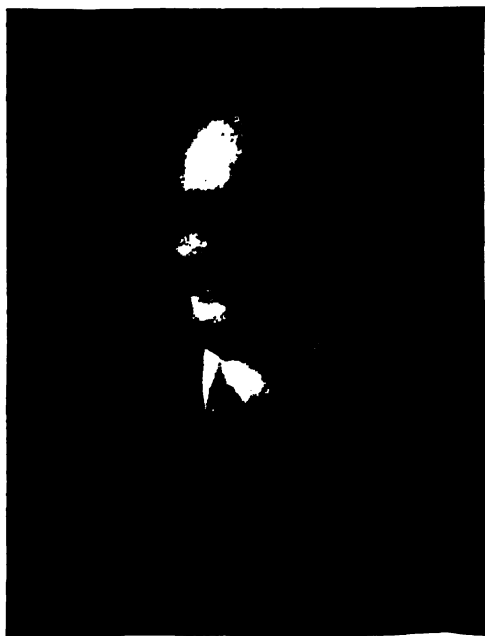
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IN THE TREATMENT OF THE CHRONIC SKIN INFLAMMATIONS, following in the wake of attacks of toxic dermatitis, attention to the general condition of the health, avoidance of anything irritating to the skin, a carefully selected diet and proper care of the skin, are important features

which must not be neglected. In addition, Battle's preparation of *echinacea angustifolia* and *thuja occidentalis*, which goes under the trade name of Ecthol, should be used both locally and internally, a drachm should be taken four times a day.—*American Journal of Dermatology*.

THE PRESIDENCY OF PARKE, DAVIS & Co., left vacant by the death of Theodore D. Buhl, has been filled by the advancement of Vice-President and Secretary Frank G. Ryan—an announcement which will be greeted with pleasure by Mr. Ryan's numerous friends throughout the country.

Mr. Ryan was so ideally equipped for this great position that he began to march towards it with what is now seen to have been almost predestination, as soon as he joined fortunes with the house seven years ago.



He left the faculty of the Philadelphia College of Pharmacy in the spring of 1900 to become chief pharmacist of Parke, Davis & Co. At the end of three years he had made himself so valuable in the councils of the house that he was elected to membership on the Board of Directors. A year and a half later he was given the important post of secretary. Six months later still he was elevated to the vice-presidency. And now, after barely another year, he is given the very highest position within the gift

of the house, and, one might say without fear of contradiction, the greatest and the most responsible position yet created in the drug trade of the country.

Born in 1861 in Marcellus Falls, New York, Mr. Ryan was educated in the public schools of Elmira, and then spent three years in the well-known pharmacy of Brown & Dawson in Syracuse. In 1882 he entered the Philadelphia College of Pharmacy and was graduated two years later at the age of twenty-three. Two or three years were next spent in various Philadelphia stores, and then he was made assistant professor of pharmacy in his alma mater. In 1898 he was given charge of the course in commercial training then established in the P. C. P., and in the meantime he had been made lecturer on pharmacy in the Woman's Medical College of Philadelphia. In June, 1900, Professor Ryan resigned all his connections in Philadelphia and went into the house of Parke, Davis & Co.

The secret of a man's success is never easily analyzed, but it may be said of Frank G. Ryan that he represents that rare, that ideal combination of technical knowledge and experience on the one hand, and business grasp and executive ability on the other. These qualities are all but incompatible, and he who unites them successfully has discovered a philosopher's stone. As president of Parke, Davis & Co., Mr. Ryan will be capable of understanding thoroughly every scientific detail of the vast business now confided to his care, and he will also exhibit that larger vision and that greater capacity for administration which will carry the house forward to conquests even more brilliant than those which have been registered in the past.

Mr. Ryan, accompanied by his daughter Helen, had returned from a seven months' trip around the world only a week or two before his election to the presidency. His main object was to further the interests of his house in Japan, China, and India, but he also visited Manila, Ceylon, Egypt, Paris, and London. In Manila an agency was established, which adds another to the considerable list of foreign branches now conducted by the house. In London, on his way back, Mr. Ryan was the guest of honor at two banquets attended by men prominent in British pharmacy and medicine, and when he landed in New York he was greeted at a large reception held at the house of Dr. Joakichi Takamine.—*Bulletin of Pharmacy*.

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MOSQUITO BITES.—The extraordinary plague of mosquitoes in New York last season, says Dr. J. E. Traub, Attending Physician St. Luke's Hospital, led me to take up a series of investigations with a view to their alleviation. I found that a combination of the fixed aromatics, viz., Menthol, Thymol, etc., with alkalies gave quick relief. While looking for a combination of this nature, my attention was called to Tyree's Antiseptic Powder, a combination of Sodium Borate, Alum, Glycerin, Car-



## EDITORIAL.

ic Acid, and the crystalline principles of Thyme, Eucaria, and Mentha, which has the advantage over the extracts of being always uniform, easily soluble, and readily assimilated without grittiness. When indicated as a dusting powder, a 1 per cent. mixture of Tyree's Antiseptic Powder in talcum, applied to the exposed parts of the body, will keep mosquitoes at a safe distance. A solution of one or two teaspoonfuls to a pint of water, forms an excellent lotion for the same purpose. This liquid also sprayed over the body, materially aid in keeping them away. The manufacturer of Tyree's Antiseptic Powder is to be congratulated in having in this preparation a specific for the relief from these pests.

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**THE ANEMIAS OF CHILDHOOD.**—The anemias of early life are the sequelae of the acute diseases common to this period. The child is especially liable to be followed by a depreciation of blood after recovery from a protracted convalescence often depends on this one cause. Moreover, the frequency with which physical stigmata or scars are left to date from an attack of measles, scarlet fever, diphtheria, or other similar diseases of childhood, can often be traced to the neglect or of insufficient or improper care during the very interval of convalescence from these diseases.

It should be recognized that the hematogenic function, which is so active in childhood, is yet very susceptible to all inhibiting influences, among which the toxins generated in the course of the acute diseases are common. When a storm infection of measles, scarlet fever, or of these similar ailments is passed, there must follow a period of reconstruction. If the damage has been slight as a result of a child of unusually strong structure, the reconstructive process will depend on the resources of the individual. But if the storm is unusually severe and the structure ill-prepared to meet its reconstructing process is certain to be long and laborious. Deficiency of the blood is one of the greatest handicaps at this period and the physician should recognize this as one of the most important indications for therapeutic assistance.

The action of Pepto-Mangan (Gude) is always very marked, and it is interesting to note how rapidly children respond to its invigorating influence. A marked increase in hemoglobin at once follows, and the red cells multiply rapidly. With improvement in the nutritive elements there is a corresponding increase in the whole blood, so that it only takes a few days to carry the average patient safely through the dangers of a trying period.

Pepto-Mangan (Gude) is therefore a very valuable tonic, and unlike so many of the ordinary hematinics it can be given with safety to the youngest infant. It has marked alterative prop-

in strumous or marasmic conditions it is especially valuable. It is absorbed rapidly, and is never rejected by even the weakest stomach.

In early life its administration is best effected by giving it in milk, and the dose should range from ten drops to two teaspoonfuls, depending, of course, on the age of the patient.

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PEPSIN is undoubtedly one of the most valuable digestive agents of our materia medica, provided a good article is used. Robinson's Lime Juice and Pepsin (see ad page 17 of this number) we can recommend as possessing merit of high order.

The fact that the manufacturers of this palatable preparation use the purest and best pepsin, and that every lot made by them is carefully tested, before offering for sale, is a guarantee to the physician that he will certainly obtain the good results he expects from Pepsin.

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GASTRIC IMMOTILITY.—A large proportion of all cases of indigestion are the result of weakness of the muscular walls of the stomach. Insufficient motility is followed by dilatation and this by excessive fermentation of the ingested food. To overcome the presenting condition it is urgently necessary to increase the muscular activity of the stomach walls, and it is well known that this is one of the most valuable properties of Gray's Glycerine Tonic Comp. Increased activity of the muscles of the stomach means improved circulation, and this in turn exerts a beneficial influence on the secretory functions. Thus, excessive fermentation and other distressing symptoms are logically overcome with actual instead of temporary improvement in the whole physical condition.

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BROMIDE TREATMENT.—No form of bromide treatment will prove successful unless the very purest salts are employed. The combination of the five bromides in Peacock's Bromides will give the best possible bromide results, simply because the salts employed in the manufacture are extraordinarily pure. They are made especially for the product, and salts of their high purity cannot be purchased in the open market. It is therefore no wonder why Peacock's Bromides has been so generally endorsed and particularly by neurologists; large users of bromides.

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DIGESTIVE SECRETIONS.—The stimulation of the secretory glands produced by the action of Seng is a most excellent method to restart the process of digestion. In those run down and emaciated patients, and after lingering diseases, Seng will prove most serviceable in building up a normal digestion. It can also be advantageously used as a vehicle in general treatment when a digestive secretant seems desirable and indicated. The good results following this form of treatment has been very favorably mentioned by many practitioners.

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SO-CALLED RHEUMATIC GOUT.—Colchi-sal is prophylactic in gouty subjects who have a tendency to deposit sodium biurate, which causes inflammatory deposits around the joints, and seems to be the most useful of any preparation of colchicum and salicylates, in assisting nature in the elimination of xanthine compounds due to the faulty metabolism of auto-intoxication. It is perfectly safe in osteo-arthritis, febrile conditions characterized by inflammation of the joints, muscles, and tendons, and in cases of thickening of the synovial membranes, especially where this inflammation extends to the tendons, sheaths, and skin.

THE MEDICAL ERA'S SPECIAL EDITIONS.—The *Medical Era* of St. Louis, Mo., will conform to its usual custom and issue its yearly series of special gastro-intestinal numbers embracing July and August. The August issue will be given over entirely to the consideration of every phase of typhoid fever. The series will contain about thirty-five or forty practical papers, and will contain a large amount of valuable information.

### Selections.

SULPHATE OF SPARTEINE IN SURGICAL PRACTICE.—McGuire states in the *American Journal of Surgery* for February, 1907, that like most surgeons he devotes little time to the study of the therapeutic action of drugs. Patients who are referred to him have usually exhausted the resources of the materia medica, and in his practice he rarely has occasion to employ medicinal agents other than the well-known anesthetics, antiseptics, purgatives, and tonics. He believes, however, he has accidentally discovered in sulphate of sparteine a valuable remedy for the prevention of post-operative suppression of urine.

He does not know whether his experience coincides with that of other surgeons, but it is a fact that in the last five years he has lost more cases from post-operative suppression of urine than from all other causes combined, and this despite the almost routine use of chloroform as an anesthetic.

The cases have usually been those with pre-existing nephritis from sepsis or cholemia. Shock has not apparently been a factor, for the condition would not develop for twenty-four or thirty-six hours. A patient operated upon for retention of urine, or for jaundice due to obstruction of the common duct, would do

well for one or two days, and just as he was thought to be out of danger there would come the news that he was passing no urine. He would become restless, then listless, would develop a stupor which would rapidly deepen into coma, and would die with all the symptoms characteristic of uremia. In the treatment of this condition the author tried water by mouth, under the skin, and in the rectum; hot packs and vapor baths; cups and counter-irritants; strychnine, digitalis, and nitro-glycerine; calomel and saline purgatives, and in one case stripping the kidney capsules, with uniformly bad results.

Two years ago he began empirically the use of sulphate of sparteine, and now has the record of six cases in which he is sure the drug was the means of saving the patient's life.

The therapeutic effect of sulphate of sparteine is to increase the blood-pressure, make the pulse slower and stronger, and act as a powerful diuretic. Its action is manifest in thirty minutes after administration and lasts for four to six hours.

In the author's belief the reason why the value of sulphate of sparteine is not more widely recognized is because authorities advise its use in doses so small as to be worthless. To get results it must be given hypodermically in doses of from one to two grains, repeated every three to six hours. When so employed he has repeatedly seen it stop a runaway heart and set in motion a pair of stalled kidneys. Its use should not be delayed until suppression of urine is already in existence, but it should be prescribed as a prophylactic as well as a curative agent.

The writer does not mean to claim that it is a specific, or that it should be employed to the exclusion of other measures, such as purgatives, transfusions, and hot packs. He does believe, however, from actual experience, that it is preferable to the drugs of the digitalis type in rapidity of action, ease of administration, and, what is more important, results.—*Therapeutic Gazette*.

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WHAT THE AILMENT WAS.—When Senator Hoar learned that a friend who they thought had appendicitis was in reality suffering from acute indigestion, he smiled genially. "Really," said he, "that's good news. I rejoice for my friend that the trouble lies in the table of contents rather than in the appendix."—*May Lippincott's*.

The "Just as good" fiends are now pirating.—Insist on

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EDITOR AND PROPRIETOR

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No. 8

## *Original Communications.*

### THE TOXEMIA OF PREGNANCY.\*

BY J. B. MURFREE, M. D., OF MURFREESBORO, TENN.

THE toxemia of pregnancy is a condition occurring in pregnant women and is due to the entrance into the blood by absorption or otherwise of some poisonous material produced by a derangement of the excretory functions, which eliminate from the blood the waste products of the maternal as well as that of the fetal metabolism.

The retention in the circulation of the excrementitious substances in excess during pregnancy in women (who at other times are in perfect health) often gives rise to a condition of auto-infection, or toxemia. Our knowledge of the nature of products of fetal retrogressive metabolism is limited, but whatever the products may be, they gain admission into the maternal

\* Read at Annual Meeting of Tennessee State Medical Association, at Nashville, Tenn., April 1907.

organism through the placenta, and are carried by the blood current to the liver, where they undergo further retrograde metamorphosis or catabolism, finally to be excreted by the kidneys with the waste products of the maternal organism.

Therefore it is quite evident that these abnormalities in the functioning of the liver and kidneys, which under other conditions would be of but little importance might, and very likely would, give rise to serious troubles during pregnancy. Furthermore, there is a probability that the lesions of the gastro-intestinal tract so often occurring during pregnancy may act as a predisposing cause to the pathological conditions so often witnessed in pregnancy.

From the time of Bouchard, the French observers have insisted that all pregnant women suffer to a greater or lesser extent from auto-intoxication, a result of the retention of certain poisonous substances in the blood, holding that the correctness of such a view is clearly demonstrated by an increase in the toxicity of the blood serum and a decrease in that of the urine, as shown by them after injections into the circulation of rabbits. This, however, has been controverted by some as being an unreliable experiment.

Nevertheless there can be no doubt that pregnant women frequently suffer from a toxin which is accompanied by characteristic changes in the liver and kidneys. The hepatic lesions are analogous to but less marked than those occurring in eclampsia, and consist of thrombotic processes which give rise to fetal necrosis, into which hemorrhage frequently occurs, while the renal changes are degenerative in character. The former are so characteristic that many French obstetricians, notably Pinard and Bouffle de Saint Blaise, consider them the primary cause of the condition, which they designate as the hepatic toxemia. They believe that in such cases the hepatic metabolism is so interfered with that certain poisonous substances ordinarily rendered innocuous in the liver gain access to the blood.

The German observers on the other hand lay special stress upon the renal changes, even so far as to claim that the degenerative changes in the epithelium of the urniferous tubes were of

## ORIGINAL COMMUNICATIONS.

such frequent occurrence as to justify one in describing pregnancy as a pathological entity.

The latest opinion is that when the lesions of the present they do not constitute the primary etiologic condition, but these as well as the hepatic lesions by the circulating in the blood "of certain imperfect metabolic products," whose nature is as yet unknown disturbances in the functioning of the liver and kidney still greater retention of the offending material, thus vicious circle which increases the toxemia.

As the result of this retention in the circulation of substances which should be eliminated, we have certain elements, which are called toxins, but the true nature is yet unknown, giving rise to certain morbid conditions to which the term of the toxemia of pregnancy is applied, for it is the result of the production at the organism of some unknown poisonous substances rise to pathological conditions peculiar to pregnancy.

These toxins, which under other conditions would be eliminated, yet their retention in pregnant women in, that is, a poison in the blood, the effects of which varying symptoms and conditions due to the amount and to the integrity of the functioning power of the organs.

The morbid manifestations of the retention in the blood of these toxins are called the symptoms of pregnancy, and they vary greatly both in the results. There may be but a slight headache which may soon pass off. Very often there is a headache and mental depression associated with the diminished secretion and swelling of the face and lower limbs.

In other cases the headache is severe and persists at the same time the patient complains of a lack of appetite; occasionally this disturbance of vision has resulted in blindness. In other patients there are mental aberrations verging on insanity. I have in mind two cases whose temper was so upset during pregnancy that they

onto the border of insanity. Cases have been reported where women suffering from this toxemia passed into a somnolent condition, which gradually deepened into coma and usually ended in death. In the toxemia of pregnancy frequently convulsions arise, constituting that morbid condition denominated puerperal eclampsia.

The symptoms of the toxemia of pregnancy occasionally are like those of an acute nephritis. The most marked evidence of the toxin is to be found in the examination of the urine, which is usually diminished in quantity, shows the presence of albumen, casts in varying quantities, while at the same time the normal amount of urea is diminished. However, the albumen and casts are not invariably present, the only abnormality being a diminished excretion of urea. When the toxemia is well marked, the mother and fetus are likely to suffer, and the death of the fetus in some cases has been attributed to this condition.

The treatment of the toxemia of pregnancy with manifestations just recited should be begun with the administration of a saline purgative, while the patient is confined to bed and the diet so regulated as to exclude all meats, saccharine matters, and the stronger vegetables. It is better, however, for a few days to confine her to an exclusive milk diet, while at the same time an abundance of water must be taken. Usually under this regime the symptoms improve, the urine increases, while the albumen and casts disappear and a normal condition is restored.

Should this treatment fail and the symptoms continue to grow worse, ten grains of calomel must be given, followed by a saline laxative, and the patient put in a hot pack and made to sweat freely. She should drink water freely while all articles of diet are excluded except milk, which must be taken in abundance. Should the symptoms now subside, the outlook is encouraging; but if they have grown worse, the albumen in the urine increasing while the urea is decreasing and the subjective conditions of the woman remain unchanged, the outlook is threatening and the only safe treatment is the induction of premature labor, no matter what the stage of pregnancy is, for if this is not done it is highly probable that the eclampsia will sooner or later be developed.



## ORIGINAL COMMUNICATIONS.

Eclampsia puerperalis is described as an acute disease which may occur during pregnancy, during labor, or after delivery. It is characterized by a convulsive seizure, with tonic and clonic spasms, in which there is a loss of consciousness, followed by a coma more or less prolonged. The coma varies in duration, but in a majority of cases it soon passes off, leaving the patient in a quiet state, often with no recollection of any unusual occurrence.

Eclampsia may occur at any time during pregnancy, but is most frequent in the fifth month, and occurs more often the nearer the full term of pregnancy is approached; yet a case has been reported which occurred in the third month. Convulsions occur more often in the primipara than they do in the multiparous woman, and they are more frequent in twin pregnancy, yet this is not my experience.

Usually an attack of eclampsia is preceded by certain warning or monitory symptoms, which serve to put us on our guard. These symptoms are headache, persistent swelling of the feet, vomiting, a full stomach, disordered vision, while at the same time the urine is decreased in quantity and contains albumen (perhaps also a decrease of the urea). The attack may come on at any time, even when unsuspected, but more generally it is preceded by a feeling of restlessness, the eyes are fixed, have a vacant stare, and do not turn from side to side, while the pupils are either dilated or contracted, more generally contracted. Muscles of the face begin to twitch and the mouth is drawn to one side, producing a distortion of the countenance. The convulsive movements begin to spread rapidly to the arms, body, and legs. The spasms are at first clonic in character, yet often they are tonic and the body of the patient becomes rigid.

The patient foams at the mouth, often bites her tongue, and vomits freely, the face is flushed and congested, while the breathing is stertorous.

There is a total unconsciousness during the convulsion, which lasts from one to five minutes, and when the convulsive movements cease the woman passes into a quiet state, which varies in its duration. The patient may have only a partial recovery of consciousness, and especially is this apt to be the case when the attack occurs in the latter part of the labor or during the puerperal period. After the coma passes off and there are no further disturbances,

But more frequently they succeed one another, sometimes rapidly, varying in number from one to one hundred. Usually when they occur frequently the interval becomes shorter, the convulsive movements more decided until finally death ensues. Sometimes the convulsions succeed each other so rapidly that it seems to be but one prolonged spasm. The duration of the coma following a spasm varies, most generally with the severity of the disease. When the convulsions are mild and infrequent, the patient recovers her consciousness after each attack, but when the cases are severe, the coma lasts from one convulsion to another without any awakening, and often ends in death.

In some very rare instances, one such convulsion may be followed by a deep coma from which the patient never awakens; though as a rule death does not occur until there has been a number of convulsions.

"The immediate cause of death is usually edema of the lungs or apoplexy, though if the fatal issue is postponed for several days it is usually attributable to an aspiration pneumonia or puerperal infection." In most cases during the seizure the arterial pressure is markedly increased and the pulse is full and bounding. In severe cases, however, it is weaker and more rapid, becoming more compressible and filiform with each succeeding convulsion. In many cases the temperature rises to a very considerable height from the onset of the disease, and gradually falls as the patient improves; sometimes, however, it remains normal. A temperature of  $104^{\circ}$  or  $105^{\circ}$  is not unusual, and in fatal cases it may reach  $107^{\circ}$  or  $108^{\circ}$  before the end. When the convulsions come on before labor, it is called antepartum, during labor intrapartum, in puerperium postpartum eclampsia. The greatest number of cases occur during labor, next before labor, and least of all after labor. When the puerperal convulsions set in before labor, usually uterine contractions commence and the child is born naturally, yet prematurely. In some instances labor does not begin before the convulsions cease, the woman goes on to full term, and gives birth to a dead fetus, yet in very rare instances the child may live. I know of one such case.

"If the attack comes during labor, the pain usually increases

in frequency and severity, so that the child will be born somewhat sooner than usual, after which the convulsions generally cease. On the other hand in severe cases, or when there is some impediment causing dystocia, the patient may die undelivered."

In the spasms occurring postpartum, the attack usually comes on soon after delivery, and after one or two spasms the attack subsides, yet sometimes they continue frequent and severe. One of the worst cases I ever saw occurred after labor. An attack of puerperal eclampsia is sometimes succeeded by a mental derangement, a hemianopsia, or other visual disturbance, and sometimes by a jaundice, which latter is a dangerous symptom. During the convulsive seizure the urine is decidedly decreased in amount, is loaded with casts, sometimes containing blood cells, and whilst there is an increase of albumen, there is a decrease of urea. After the convulsions cease and the patient improves there is an increase of urine and urea and a disappearance of albumen gradually.

The frequency of puerperal eclampsia is estimated at about one in three hundred labors; though the statistics do not agree on this point. The albumen being found in the urine during an attack of eclampsia, it was generally thought that the disease was due to acute nephritis and that the condition was identical with uremia. But this view was abandoned when it was found that only a few of the women suffering with chronic nephritis had eclampsia, while in some cases of eclampsia no albumen was found in the urine. While the kidneys do present (in many cases) evidence of disease, so also pathological lesions are found in the liver, spleen, heart, and brain.

"It is apparent, therefore, that the main lesions in eclampsia are found in the kidneys, liver, and brain; but in view of the marked discrepancy in the statements of the various authors concerning their relative frequency and importance, it would seem that the anatomical changes are not constant, although those in the liver are most characteristic. Accordingly we are forced to the conclusion that either under the term eclampsia are included a number of different disease entities, each with their own anatomical lesions, or what is more probable, that the morbid process

is caused by some as yet unknown poisonous substance circulating in the blood which may give rise to lesions of varying intensity in the several organs."

So far pathological researches have failed to certainly demonstrate the particular morbid lesions that produce puerperal eclampsia. Quoting from a recent writer: "It is probably a toxemia, brought about by a changed metabolism of the liver, and perhaps of the other organs and by a deficiency in excretion, and acetone is one of the most active of the toxic agents."

While it is true that eclampsia is somewhat like uremia, yet there is a wide difference. Eclampsia is something more. It has also been recently said "that the lack of hypertrophy of thyroid gland, which is natural in pregnancy, was the cause of eclampsia, by a lack of its product iodothyron, which is supposed to neutralize the toxins in the blood, which are thereby left in the system to do their disastrous work."

The modern theory which is now most generally accepted is that puerperal eclampsia is the result of an auto-intoxication produced by the deficient metabolism and an increase in the catabolism of the tissues and the waste products that occur in pregnancy.

"Puerperal eclampsia is due to the action of the toxins elaborated in the organism by metabolism and either produced in excess and not sufficiently destroyed, through faulty metabolic processes, or retained through deficient action of the kidneys, skin, and other emunctories. It is well known that the process of metabolism produces certain substances which are distinctly harmful to the organism. These are disposed of in two ways; first, by the activity of the spleen, liver, and other organs; second, by elimination. If then either of these functions is so disordered as to fail in its duty an auto-intoxication results, and the system is overwhelmed with these metabolic products. During pregnancy, the liver, which is the chief organ engaged in this process of metabolism, has laid upon it a greater load than in the normal condition, and under this stress the process may easily become disorganized so that the organ is unable to neutralize any toxins in the blood as it normally should. The toxemia results."

The diagnosis of puerperal eclampsia usually offers no special

difficulty if we have kept in touch with the patient during the last few months of gestation. The headache, the disturbed vision, the restlessness, but more particularly the presence of albumen in the urine, would lead us to anticipate a convulsive seizure. But if first seen during the spasm we must differentiate from epilepsy, uremia, gastric colic, and hysterical convulsions. This we can generally do by carefully considering the history of the case, the symptoms presented, the character of the spasm, and especially by the examination of the urine.

The prognosis should always be guarded, for at best it is only problematic, as a type of symptoms presented is no sure index to the gravity of the disease. An attack of puerperal eclampsia is a serious complication of labor, and one that greatly jeopardizes the life of the patient. It is one of the most dangerous as well as the most frightful conditions that we meet with in labor. Some patients die during the first seizure, but this is unusual, while many recover after a number of attacks. When the coma following a spasm is deep and long-continued, the outlook is gloomy. Yet I call to mind two cases where coma lasted twenty-four hours in one and twelve hours in the other, and yet both recovered. The continuance of the coma is a danger signal.

The treatment of puerperal eclampsia is both prophylactic and curative. The prophylactic treatment consists in an intelligent and rigid observance of all the rules of personal hygiene. The liver must be stimulated to the full performance of its function, while all the emunctories must be kept active, the patient should have a highly nutritious, yet easily digested food, and she must have an abundance of exercise in the open air.

The curative treatment embraces all the means used after the occurrence of the spasm. Upon their first manifestations cork should be placed between the teeth to prevent the tongue being bitten. Chloroform should be given to shorten the spasm, and morphine hypodermically to prevent their return. This, however, is only treating the symptoms and not the disease. To eliminate the poison an active purgative should be given at once—ten grains of calomel or two drops of croton oil. The patient should be placed in a hot pack and made to sweat freely, and the normal

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## UE AND THE DAN- .IED METHODS.\*

KSVILLE, TENN.

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introspection and as their faculties of observation and judgment are better trained. It has been said that extremes meet; this often appears true. Usually the very ignorant and unlettered or the highly educated furnish most material for the charlatan. It at first seems strange that a class contributing largely to charlatanism is among the highly educated, but look a little closer and you will find them faulty observers or among the theoretical who follow the lead of their emotions rather than the dictates of reason and common sense. They have never learned to divorce emotion from judgment. They have never learned that feeling or emotion is one thing and that judgment or common sense is a very different thing, though of course always related. Too often emotion is at the helm and reason is subjugated.

Further we should recognize the fact that body and mind are each complementary to the other, and no physician with anything like a thorough grasp of our art would, *in selected cases*, attempt to treat the mind without a proper consideration of the state of the body, or to treat the body without due attention to the mind. In this I state nothing new to you. My paper to-day is rather a collation of facts more or less familiar to you all.

Again we are accomplishing cures every day, and this is taken as a matter of course. Let some irregular have one and straight-way the news is sent broadcast through "the leaden lips of the press" or by some voluble member of the community.

For the purpose of this paper we will consider man as a triune being, physical, intellectual, and emotional. It is principally the domination of the emotional over the common sense or the action and interaction of the intellectual and emotional upon the physical which I wish specially to consider. No man or woman reaches the highest state of development unless all three of these attributes attain their proper degree of growth and are properly co-ordinated or adjusted. These attributes of man are all closely related and naturally interdependent. A little dissection is necessary in order to bring out plainly my meaning, and this I will attempt as I proceed. For instance, a man under chloroform (or unconscious) represents the purely physical, the intellectual and emotional being abolished. Again you frequently hear the

expression that a given person has no heart; he is simply a machine. This person may be highly intellectual and so conduct himself. Here there is not much of the emotional present, or it is so thoroughly dominated by the intellectual that the emotional nature is not in evidence.

Thirdly, you see now and again people who may be thoroughly good and highly respectable, and even in a way highly endowed, yet it is often said of them that they have no common sense or judgment. Such a person may really have very little or may have a great deal, but the emotions have such sway they are thoroughly dominated and controlled by them. The functions are not properly co-ordinated. Here the physical and intellectual (or judgment) is under the control or domination of the emotional. And just in proportion to the degree of usurpation or displacement of the intellectual by the emotional, just to that extent does the person become illogical, unreasonable, ill-balanced, crossing the border line, unbalanced, or insane. Illustrative cases will serve further to elucidate my text. Here I will state that just as the man under chloroform shows a natural tendency to recover (vis.: *medicatrix naturæ*), so this is a force present in *all* cases to a greater or less degree (depending upon vitality and resistance) and too well known to require further reference. With this introduction I propose largely to drop the consideration of the physical except as it is acted upon by the intellectual (or common sense), and by the emotional, which may or may not indicate a lack of it.

As we all know the practice of medicine does not consist simply in giving drugs. Yet to a large extent this seems to be the opinion of many people. While as a matter of fact comparatively few people present themselves for treatment who cannot be benefited by judicious medication, there are a number of auxiliaries, and some of these are far more important, *in selected cases*, than medicines. One of these agents has been so much written about for the past few years, the subject has become so trite, I feel almost like apologizing for making it the subject of a paper. And yet it will be many a year before the field of its usefulness and its dangers are fully apprehended. As close by every beam



lies its shadow, so every remedy of any value has its dangers.' At the present time the curative value of nature plus suggestion cost annually many lives, as blinded by fallacious reasoning, many people, trusting to methods that savor more of antiquity than the twentieth century, neglect to seek relief till they are beyond aid; and further, ignorant attempts at cure frequently cause a worse disorder. This is a direct cause of many neuroses which follow as sequelæ, for instead of following the dictates of common sense the emotions are in full control. These sap the nervous energy and vitality of the individual and may result in some of the neuroses, insanity, or, by weakening the resistance, in other diseases. The individual often deceives himself and fancies he is recovering when it is patent to others he is steadily losing ground. He is in a state of auto-suggestion. But we should be patient with such people, for many of them are honest in their beliefs and simply "have zeal without wisdom." They sometimes witness cures which would be plain enough to you but to them seem marvelous. Let me illustrate here.

*Case 1, showing cure by "vis medicatrix naturæ."* An old negro in my neighborhood was very ill. Three excellent physicians pronounced his illness fatal beyond doubt and got on their horses and rode away. An old negro woman declared the negro was not going to die and that she could cure him. She had a chicken killed, cleaned, and split open, and this she bound over his stomach. The negro recovered. As he had a diseased body of course the chicken had nothing to do with his recovery. Nature had done more than the physicians could expect. His recovery was merely a whim of disease such as is familiar to most of us long in practice, and *indicates the curative powers of nature*. Under the circumstances this had no weight in the community; but suppose this accident had happened with the patient under the care of some charlatan or one of the mystic healers, and to a person of prominence in the community. What a sensation it would have created, and how difficult it would be to explain, and how your efforts to explain it would have been set down by many to a selfish motive purely. Good accountants make mistakes every day simply in adding a few simple figures, yet almost infalli-

bility is expected of us in this most difficult profession. The public needs to be educated in other lines relating to medicine besides the tuberculosis problem.

*Case 2*, illustrating cure by suggestion. In 1886 I was called one night to see a negro woman, who, the messenger said was paralyzed, she could n't speak. When I entered the room a glance was sufficient for a diagnosis. I had a case of hysteria. I felt for my hypodermic syringe and found it broken. My spirits fell as I was in a hurry to get back. Success crowned the following expedient. Going anxiously over to the patient I began a most (apparently) careful examination, I then had the light brought closer, opened her mouth and after about a minute's close examination suddenly exclaimed, "No wonder this woman can't talk, her tongue is dislocated, but I'll fix it in about thirty seconds." I then took hold of the tongue, pulled this way and that and after a sudden jerk announced that it was all right. At once she began to talk but not perfectly. She said she could n't. I told her then it was because I did n't have her tongue exactly right and I would try again as I knew I could fix it. With another minute examination terminating with a twist of her tongue, I said, "Now it is all right, see how it works." It worked to perfection. Right here I wish to state that in dealing with these cases that *as a rule the more ignorant they are, the more simple the means of cure, the more intelligent they are the more complex must be the means adopted.*

*Case 3*, illustrating cure by suggestion plus shock. Miss X., age 25, had been apparently paralyzed (paraplegia) for six months. She had been treated by several good men apparently without benefit. It took no expert to see that the trouble was purely mental. As I sat and looked at her I could but wonder what would be the result of a sudden cry of "house afire," as I know this has cured others. Probably this would have accomplished a quicker cure than I was able to do, though I dared not try it. I was loth to attempt a quick cure for fear of failure. My hair was not long enough, I did n't have \$20 gold pieces for waistcoat buttons and the other paraphernalia of the charlatan, for you know in these cases as Church states, "methods are usu-

ally successful in proportion as they are novel to the patient, strike the fancy, and stimulate the imagination." Besides it is the "far away cows" that "have long horns." But after a careful examination, with all the assurance I could summon I assured her I had made a discovery; I told her I knew *exactly* her condition and would certainly cure her. With medicine, partly as a tonic, but principally as a placebo, cold baths (shock), and such crude massage as I could secure in her home, she was soon a well woman and has long since married and has children.

*Case 4*, illustrating cure by shock plus suggestion. Miss H., age 21, had always had good health till August, 1900, when she was taken sick after drinking a glass of soda water. Her weight quickly dropped from 150 to 115 pounds, but there it remained. From the beginning of her illness till cure, about two and a half years, she said she could never retain anything *during the day* except a little beef juice and *ripe apples*; these she said never disagreed with her. At night she could take a glass or two of milk. She said water was the worst thing she could take and was vomited immediately. Other food taken would be vomited about fifteen minutes after it was taken. She would simply be seized with a pain running from temple to temple and this would be relieved by vomiting. This was not accompanied by nausea. I saw and prescribed for the patient once, a year after the illness began. She was very cheerful and bright and appeared fairly well nourished. From the contradictions, etc., in the case I was satisfied it was a psychic neurosis. I found that though she might remain in bed during the day, she could retain the milk only at night. She was married in September, 1901, and became pregnant in May, 1902, and came into my hands in October, 1902. As labor would be an epoch in her life I always insisted she would get well at that time, and upon this anchored her hope. Her labor, which occurred in December, 1902, was terrific. Now imagine a woman thoroughly exhausted by a terrific labor, forceps, craniotomy, and at last delivery, peritoneum torn, and added to all this a post-partum hemorrhage; a woman who in the early part of her labor had morphine (one eighth grain) and in the last chloroform, freely; then subsequent to delivery, ergot; yet,

notwithstanding the fact she had been vomiting apparently almost everything she swallowed for two and a half years, she was a well woman from the time of delivery, and has never since had any digestive disturbance of any consequence.

*Case 5*, illustrating utter failure of suggestion and the prompt result of medicine. Mr. X., age 17. Strong tubercular history on both father's and mother's side, young man, had a fistula of two years' standing and two unsuccessful operations for same. Been having fever every day for six weeks and terrible night sweats. Consulted me on account of night sweats. I assured him I would stop them, but he also needed a tonic. I gave him two boxes of capsules, one for a tonic and the other for the night sweats. He had every reason to have strong faith in me and I knew he did have. The first night at bed time he made a mistake and took the tonic instead of the right medicine. He said he sweated as usual that night and did n't discover his error until next morning, when he laughingly told me of it. The night following he took the medicine as ordered with the result that there were no more night sweats. Here the mind was not involved, the physical man being diseased, and I relate this simply to add to the completeness of my paper, as such cases are matters of *every-day observation to you all*.

I know I am but recalling to many of you cases the prototypes of which you have often seen. But these cases are to me always interesting and instructive. They illustrate the value of suggestion and allied methods. As you know, the use of suggestion is as old as medicine itself. It is an influence inseparable from our art,<sup>1</sup> yet some physicians, through some marked personality, mannerism, brusqueness, or other peculiarity, wield this influence to a much greater degree than others. Nor is it confined to the practice of medicine, as you see it in many men both in public and private life. In medicine, as in other walks of life, its influence is for good or evil according to the impression, conscious or unconscious, left upon the patient. It is a pity the laity does not realize that all remedies of any value are two-edged swords: that anything capable of doing good is also capable of doing harm.<sup>1</sup> This it should be a part of our duty to explain to our

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patients when the mirage of mental healing tends astray.

The nervous system, playing the important role in the vice and virtues of the economy, receives the influence, hence is the medium of transmission of this influence. How important this is may be partly gleaned from the neuroses. For instance, take the experiments of Pavlov by Dr. Kincaid before the Tri-state Association yesterday at Memphis. We were told how appetizing food presented to a dog resulted in the secretion of gastric juice and digestive power. We learn from this that the appetite secretion entirely the result of a nervous impression for digestion as the stomach can secrete, and we gain a grain of truth in the old saying, "It won't hurt you if you crave." We see from this how a pleasant impression (suggestion) brings out and augments this secretion. No experiment to teach us how the opposite emotion, fear or anxiety and other depressing emotions, arrest and hence digestion. But even some pleasant emotions, such as joy, give the same results. As practical men we must utilize this knowledge for the benefit of our patients and guard them against depressing influences as far as possible. We attempt to instil in all possible ways compatible with honor a hopeful and helpful view.

Some time ago I had a nervous patient who was troubled with diarrhea each time the fire bell rang, and all are familiar with the frequent diuresis accompanying nervousness, a severe and continuous nervous strain. We know further that nervous conditions not only cause functional derangement, but may lead to serious disease, as diabetes mellitus, epilepsy, or even insanity.

Yet shock has its therapeutic value. The late earthquake shock that worked such injury to San Francisco cured the sick who had imagined themselves paralyzed and bedridden for fifteen years.<sup>2</sup> This is not a new lesson, and is no surprise to the student of medicine. So shock is frequently of benefit to nervous patients, but of course its use in medicine should be only in skilled hands, and the

great caution, for it is a frequent cause of the neuroses and sometimes of death itself. As we well know, there are numbers of physicians who could have wrought the same cure, probably, however, not so promptly, by much milder means if given the proper opportunity and environment. One of the great virtues of cold in the treatment of nervous subjects is shock. The sudden intact of cold, it seems to me, often acts for the nerves as does exercise for muscles. It is the exercise or functioning of the nerves and I believe this often of direct tonic character. Then it changes the whole current of thought. There is an old Scotch proverb which reads, "Dreaming goes afoot, but who can think on horseback," and I beg to inquire who can think under the dash of cold water over the spine.

As we know, the cautery often has a good effect in the neuroses, probably through the influence of shock. I believe in many diseases outside those we recognize as nervous, the mental condition of the patient may sometimes turn the tide for or against recovery. While a determined, hopeful, or a passive condition of the mind may not increase the opsonic index of the blood, it guarantees the full utilization of this power and such other vital forces as nature arrays against disease. Of course in many conditions the influence of suggestion is absolutely of no value, and many others where its role is most insignificant.<sup>1</sup> Again, any tyro is familiar with the disturbed heart action that accompanies mental agitation. So in many diseases we not only attempt to secure a determined or a tranquil mind, but keep the body quiet (usually recumbent), as well in order to secure the minimum tax upon the heart and to further aid other means employed against disease.

It is true, as Shattuck states, that medicine owes a debt to many of the half truths that have been heralded abroad as infallible cures;<sup>2</sup> for physicians have always thoroughly investigated all such, sifted carefully the evidence, and amongst the chaff, when present, appropriated the grain of wheat. In doing this one is often astonished at the worthless character of testimony where one would not suspect it. "About thirty years ago when spirits were rather rife in England, Professor Darwin visited by invitation a seance, in order to inquire into their nature. As a re-

sult, he declared, 'Unless I had seen it I could not have believed in the evidence of any one with such perfect good faith as Mr. Y. (the host) being so worthless. It has given me a lesson with respect to the worthlessness of evidence which I shall always remember, and besides, will make me very diffident in trusting myself.'"<sup>4</sup>

And so it behooves us not alone to sift carefully our own conclusions, but to be patient with the vagaries of all honest people, though some among the mystics would guillotine the achievements of medicine and set back its progress over two thousand years; the genius of Hippocrates, of Harvey, of Pasteur and others would be shorn of results; and in the treatment of disease we would *practically* revert to the incantations of the savage, which, as you all know, is but a form (and a good one too for such people) of "suggestion and allied methods;" this too notwithstanding the fact that among the manifold blessings of our art it only last year saved Memphis and the cities of the South, not alone its thousands and tens of thousands, but far and above this value in life and happiness.

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<sup>1</sup> "Some Aspects of Science and Fallacy as They Relate to Medicine." *Runyon*. The *Journal*, May 6, 1905.

<sup>2</sup> Editorial, The *Journal*, May 12, 1906.

<sup>3</sup> Shattuck, *Progress in Medicine*, June 9, 1905.

<sup>4</sup> Editorial, "Psychic Research," The *Journal*, May 26, 1906.

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## SUPRA-PUBIC CYSTOTOMY FOR PROSTATECTOMY.

BY COOPER HOLTZCLAW, M. D., OF CHATTANOOGA, TENN.

THE writer, presuming a knowledge of the anatomy of the prostate and the field of operation, the pathology and baneful effect of the diseased gland, and conceding the necessity of operative procedure, desires to omit these important considerations together with various interesting statistics, and merely wishes to

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\*Read at Annual Meeting of Tennessee State Medical Association, at Nashville, Tenn., April 1907.

advocate the above plan in a few practical remarks, it being the simplest and safest method.

If my recollection serves me correctly, the choice of perineal and supra-pubic route is about equally divided by different operators. The genito-urinary specialist and those who do a great deal of this work, as a rule, rather prefer the perineal plan; but for the general surgeon, and those who operate infrequently for this condition, the supra-pubic method should appeal as the method furnishing the best result. My personal experience certainly justifies me in urging it.

Of course when a grooved sound can be introduced in the bladder and used as a guide the entrance into this viscus is easy and simple, then, with the use of a special tractor instrument, the diseased gland can be readily enucleated.

There is always the danger of severe hemorrhage, either primary or secondary, to the patient, who as a rule can ill afford to lose any blood. There is also the almost unavoidable damage to the vas deferens, with its consequent depressing effect on the nervous system, and the disturbance of mental equilibrium produced by the mere destruction of the sexual function. The supra-pubic method is devoid of these two very important factors. The shock is about the same in either method.

Where there exists the so-called third or middle lobe, which is exceedingly frequent, and which, in my opinion, is a far more obstructive agent in preventing the emptying of the bladder than the right and left lobes, be they ever so large. The perineal route renders its removal very difficult and almost impossible, whereas through the supra-pubic opening it can be easily, quickly, and completely removed.

The drainage of the bladder in the perineal method has, in my experience, been so unsatisfactory that it is one of the main reasons of abandoning this method. It is imperative to use a drainage tube of some kind, but these have produced so much pain and discomfort to the patient, have caused so much irritation and tenesmus by intolerance of the bladder, that they were with much difficulty retained, in spite of all the methods of keeping them in



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ra-cubic operation: It requires no skilled ass  
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viating this danger. If the bladder is empty,  
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ommencing at the os pubis. Cut down thro  
to the space of Retzius. The hemorrhage is i  
ily controlled. The bladder now can be easily s  
th the knife hugging the pubic bone, plunge be  
rough the bladder wall. The escape of the b  
dicates its entrance. The edge of the bladde  
by forceps and can then be enlarged at will s  
finger. The interior of the bladder is then ex  
tion and size of the three lobes of the prostate  
gers of one hand should be introduced into t  
ip and firmly fixing the prostate, then with the  
ther hand break through the bladder wall and  
tate, and the gland can then be easily peeled o  
ie bladder wall and capsule are tough and th  
long scissors are used to make an opening th  
ough to admit the finger. The removal of the  
mplished with more difficulty. Nitze bladder  
, but any kind of biting forceps or blunt pair  
can be used, preferably dull, as the crushing  
hemorrhage. The hemorrhage can be imme  
ely controlled by a roll of gauze the size of  
l around dressing forceps dipped in boiling  
applied to the bleeding points.

The whole operation need not take but a few minutes. If, however, the patient is old and feeble and exhausted by long and continued suffering and infection, the operation can be done in two stages; the priority of the suggestion of which is now being claimed by several prominent surgeons. I can most earnestly recommend this plan, having used it several times. I first open the bladder under cocain anesthesia, then let the patient recuperate from all his troubles, and in a week or two later remove the prostate under general anesthesia.

I use no drainage tube, seldom finding it necessary to irrigate the bladder, but let the bladder wound heal slowly by granulation, which is usually accomplished in from four to six weeks, by which time the wounds in the bottom of the bladder will have healed and contracted, thereby making a complete and effectual exit to the urethra.

I allow the patient to sit up in three or four days, when he can easily be taught to take care of himself, and usually will take great pride and interest therein.

The lack of experience, the rapidity and facility of the operation, the freedom from hemorrhage and unpleasant sequelæ, the more perfect drainage, and satisfactory results, all appeal to me in recommending this method of operating.

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#### NON-INFECTIOUS SCLEROTIC OVARY.\*

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BY JNO. A. GAINES, M. D., OF NASHVILLE, TENN.

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It has been my experience in the past five or six years to observe a type of sclerotic ovaries, which if produced by infectious agencies, certainly differ from the pathologic changes usually found. I am convinced that other operators find similar conditions. I have often observed the condition referred to in young women under twenty-five years old, unmarried, with hymen intact, and no history of purulent leucorrhea.

When operating for acute appendicitis the median incision was

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\*Read at Annual Meeting of Tennessee State Medical Association, at Nashville, Tenn., April 1907.

chosen in order to investigate and deal with the pelvic organs owing to ovarian pain (neuralgia) at or near time of menstrual period. In some instances a cystic ovary was detected before operation, at other times no pathology could be discovered by examination; often the ovary felt normal as to size, at others small and atrophic, always freely movable.

The pathology microscopically viewed is always a thickened whitish, and at times pearly white, capsule. Lying just underneath this in the cortex, usually are small cysts varying in size from a pea to that of an English walnut. At times the whole substance of the ovary contains small cysts, forming the greater part of the bulk of the ovary. These can be shelled out without rupturing them and contain a slightly turbid fluid, in some instances semi-gelatinous substance. At times the tunic and ovarian stroma are dense and firm, and cut with unusual resistance; at others, although having much the same appearance, they are so friable and easily torn that it is with difficulty that suturing is done, when the diseased or cyst-bearing portion is resected. There are no adhesions in most cases, and the tubes, broad ligaments, and pelvic peritoneum show no signs of pre-existing inflammation. Occasionally the tubes seem unusually congested and red, but non-adherent. At times there is a varicosity of the pampiniform plexus of veins; at others the vessels seem perfectly normal. The superficial cysts contain clear fluid, but occasionally one may be found where the fluid has been absorbed and a yellowish or grayish accumulation of earthy salts has been deposited, evidently an unruptured corpus luteum. This is also made clear by the fact that I have seen blood cysts filling the description of such unruptured corpus luteum in various stages of absorption. This condition is frequently associated with small and flexed uteri. But on the contrary the uterus may be well developed.

These patients for the most part are delicate, nervous young women, yet it occurs in large fleshy women. However, the neurotic condition was quite as pronounced in the fleshy women as in the slender delicate ones. There is usually either a history of painful and delayed periods from the first or dating from some

particular period, all or nearly all the subsequent periods have been attended with pain; lasting usually from a week or more before the period until a week after. This is subject to considerable variation, however. These patients are usually suffering most of the time with pelvic hyperesthesia, are always tender on examination, even between periods and when not suffering pain. They gradually develop the neurotic condition, and become confirmed neurasthenics, often with hysterical outbreaks before or during the menstrual flow. The menstrual flow also varies greatly, some of these sufferers will only have a slight "show," lasting for two days, others a scant flow for a week, and still others after suffering for a week with severe ovarian pain that gradually seems to embrace the entire pelvic contents, culminating in agonizing pain for a few hours before the flow starts, which soon becomes copious with cessation of pain, but extreme nervousness. Most of these patients suffer with backache for a time confined to sacral regions with pains at times radiating down the thighs, but after a few years they complain of pain along the entire spine, back of head, and occasionally headache in top of head, and become tender to touch along the spine, especially about the lumbo-sacral and mid-dorsal regions; in fact the neurasthenic spine. Later most of these cases settle down into the class of confirmed neurasthenics and gradually add one after the other of the symptoms until they present a classical picture. There is almost always tenderness along the large abdominal blood vessels.

*Etiology.*—I do not believe this is caused by inflammation of infective origin. After ascribing about fifty per cent. of cases to gonorrhea, and twenty-five per cent. to puerperal infection, most of our texts suggest that it may be caused by the exanthematous fevers (measles, scarlet fever), as also by mumps, or secondary to other pelvic inflammation, as following appendicitis, etc. The type referred to in this paper are due to more or less obscure causes. The exanthematous fevers, mumps, and chronic congestions from displacements of ovary, but most especially the chilling of the body during a menstrual flow, either by a cold bath or rain storm, or sitting on cold stone steps in the evenings,

are most likely the cause, resulting in a congestion to the inflammatory stage, as may occur in any glandular structure, eventually leaving the morbid changes referred to above without adhesions or pus formation.

The diagnosis of these cases is not difficult. By manual palpation the ovaries may be felt as small hard bodies or irregular semi-fluctuant masses or again as a single cyst, usually quite tense. I have seen them, however, quite flacid and fluctuant. If the patient is not anesthetized these structures are quite tender. It should be remembered in young women that nothing is detracted from the value of the examination when the finger is inserted into the rectum instead of the vagina, and is often much less painful and produces less nervous disturbance. If making an examination for the first time and it is deemed wise to examine by vagina as to condition of cervix and uterus, an anesthetic should be used.

In treating these patients only slight and temporary relief can be had by local or medicinal measures. The local measures used are hot vaginal irrigation, the application of the glycerine or glycerine-ichthyol tampon, every second or third day. At times a series of small cantheridal blisters repeated three or four times as fast as the blister from the preceding one gets well, or the use of Paquelin's cautery lightly applied at several points over ovarian region will give marked temporary relief.

In the surgical treatment of these cases, a very common mistake is to dilate and curette the uterus in the vain hope that removing some obstruction will result favorably. This, however, in these cases will avail little, and where it is done for the mental impression, as we sometimes hear, the doctor's brain is less functionally active than the girl's cystic ovary and quite as abnormal. However, in meeting the opposition of patient or her family, we are often reduced to quite desperate measures of temporizing, until in utter hopelessness they submit to operation as a last resort.

Where conditions will permit, these patients should be subjected to radical measures, dealing with any abnormality of uterus as flexions or stenosis by dilating and curetting at site of flexion,

and an area of granulation will usually be formed at this point. At times "Dudley's" operation should be resorted to to straighten the canal. Again in long narrow conical cervix with relaxed supports, amputation of cervix may be needed.

In dealing with the ovaries, conservatism should be practiced as far as possible. The cyst-bearing portion should be taken away and the rent in the ovary closed in with fine cat-gut, so as to have no raw or bleeding surface. Where this is not deemed necessary the small cyst may be punctured and the lining membrane cleared out, or they may be opened with thermo-cautery, which by puncture may be made to destroy the secreting membrane. At times it will be necessary to remove the entire ovary and tube, and in fact a wide section of the broad ligament for varicosity or calcification of the blood vessels. It should be borne in mind that although we only leave a slender part of an ovary, the functions are continued and the nervous shock to these neurotic patients of sudden menopause is prevented.

In the resection of the ovary, there is slight danger of recurrence if care is taken to remove all but healthy tissue. I have had but one recurrence. This occurred in a patient that I removed the right ovary, which was one cyst the size of a hen's egg. With resection of about three fourths of left ovary, leaving what seemed only healthy ovarian tissue. At the same time, did a ventral fixation of the uterus. Thirteen weeks after this operation I reopened the abdomen to remove a recurrent cyst the size of a small orange from stump of left ovary, which was growing rapidly and quite painful. I removed all the left ovary-tube and adjacent part of broad ligament. Recurrences are so very usual that we should in most cases leave some ovarian tissue.

At times the ovary is small, white and firm, and very tender, apparently not functionally active, and in most cases associated with calcerous degeneration of blood vessels, and in one of my cases, the ovary was self-amputated, about the size of a large lima bean, and almost completely calcified, laying loose in the pelvic cavity, the other, or right, ovary was a mass of small cysts throughout its entirety. These small sclerotic ovaries are at

times the seat of most persistent neuralgia, and will yield only temporarily to any measures short of extirpation.

I would suggest, however, a very careful anamnesis should be taken and carefully considered before the removal of such an ovary, especially if the opposite should require removal. We may expect some relief in such an ovary, by bringing up in proper position by some one of the many operations for that purpose; by the improved circulation.

I feel that our knowledge is quite incomplete as to the cause of this condition, and especially in regard to the systemic alterations both of mind and body. The so-called internal secretion of the ovary has some important relation to metabolism and the excretion of certain substances from the body at large, and whether the nervosis phenomena are due to pain and irritation only, or whether an altered or abnormal activity of the poorly understood function of the ovary is really responsible or not are questions not yet settled. In our operations we should always leave as much healthy tissue in these structures as possible.

It should be borne in mind that the removal of ovaries of the type described do not produce the nervous changes that occur when healthy ovaries are removed. In fact a premature menopause is so nearly accomplished that the patient receives only benefit from the loss of these ever-painful organs.

I do not believe the removal of the ovaries ever produce those masculine changes in the physical appearance that has often been attributed to this source.

I wish to most emphatically denounce the useless removal of healthy ovaries, and insist at all times, where possible to leave even a fragment of healthy tissue, that it be done, excepting only those cases where tubercular or malignant disease is associated.

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### GONORRHEAL RHEUMATISM.

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BY W. T. MARRS, M. D., PEORIA HEIGHTS, ILL.

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THIS is a condition that most physicians do not like to treat on account of its stubbornness in responding to any routine

method. The disease has no regular way of manifesting itself. It may be engrafted upon an attack of gonorrhea in the acute stage, or it may make its appearance upon the subsidence of the attack a few weeks later. If the trouble manifests itself early it is likely to be accompanied by some elevation of temperature and the usual signs of inflammation; if, however, it appears in the nature of a post-gonorrheal symptom, there is usually no acute inflammatory action. When gonorrheal arthritis occurs its onset is rapid and without previous warning. The tendons and bursæ are frequently affected as well as the joints. As a rule not more than two or three joints are affected, and this is a distinguishing point between this type of rheumatism and the multiple arthritis of another type. If a knee is affected the ankle on the same side is likely to be involved, and vice versa. There is the same pain and loss of mobility as in other varieties of rheumatism, but the urine remains practically unchanged. It does not respond to ordinary rheumatic treatment only in such cases where uric acidemia is an occasional complication. Laxatives may do good as well as diuretics of the sedative class. The patient suffers a great deal of pain and often cannot sleep. If the patient is kept well-relieved with no mental discomfiture his recovery will be more speedy.

The correct treatment depends in some measure upon whether the attack partakes of the nature of the acute or the subacute. It is necessary in both types to give anodynes to assuage the suffering. Papine acts very nicely in relieving pain. It does not arrest the secretions or disturb the stomach as so many opiate drugs do. It is a laudanum with everything objectionable left out. If the joint is hot and feverish hot moist cloths may do good, and dry superheated air is worth trying. These things will amuse the patient and help to occupy his mind. Guaiacol, menthol, aconite, and other remedies are useful as local applications, but systemic medication is usually necessary in order to relieve the intense pain and to produce mental tranquility. The urethritis should have thorough treatment. Copious and frequent irrigation with water as hot as can be borne is good treatment. Any mild and non-irritating antiseptic may be added to the water.



When the rheumatism has a certain element of chronicity about it and the urethral discharge has ceased, the physician may be easily misled. In such cases we will usually find the prostatic urethra a hot-bed of gonococci.

In addition to irrigations the dilatation with large cold sounds is very useful. Dilatation of the anal sphincter has been known to effect a cure in some cases. Chronic cases are benefited by a circle of small fly blisters and the persistent use of the continuous current. Absolute rest must be enjoined in this disease and the pains mitigated. Strong cathartics and depletive remedies should not be employed. Sedation and not stimulation is required. The primary lesion should always be looked into. In other words, if there is a gonorrhea, active or latent, it should be treated.

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"ERGOAPIOL" (SMITH): ITS THERAPEUTICAL INDICATIONS: WITH CLINICAL NOTES.

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BY C. W. CANAN, B. S., M. D., PH. D.

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WE desire to call the attention of the medical profession to a new pharmaceutical product possessing valuable therapeutic virtues in many diseases peculiar to women. This remedy is known as Ergoapiol (Smith), and since its introduction to the profession it has rapidly gained favor with our best physicians. It is strictly ethical, manufactured from the purest drugs, and advertised only to physicians. It is the result of an original combination of the following remedies: apiol, ergotin, oil of savin, and aloin, all of which are freed from toxic and deleterious substances. These agents are blended in such proportions as to overcome the powerful irritating qualities of each and raise the tonic properties of all. A glance at the therapeutical indications of these remedies singly will convince the most skeptical of the virtues of Ergoapiol — the result of their combination.

Since the days of Jaret, Homolle, and Baillot, apiol has gradually grown in favor as a therapeutic agent, but until recently it had one decided drawback, that of containing deleterious and toxic

impurities in combination. Recently, through the skill of the never-tiring pharmacist, these have been eliminated, and it can now be prescribed without fear of producing disagreeable symptoms, but with an assurance that its full therapeutical virtue will be realized. Even in its impure state apiol gained considerable reputation in the treatment of nephritis, dropsical effusions, amenorrhea, and dysmenorrhea. Its emmenagogue properties have been greatly enhanced by the removal of all impurities. In small doses it now became a mild aromatic stomach tonic; it is also highly recommended in membranous dysmenorrhea. The therapeutical value of ergotin is too well known to call forth comment here. Combined as it is in Ergoapiol, it becomes an excellent adjunct to apiol, and adds very materially to the efficiency of the finished product.

All students of medicine are aware that oil of savin is a powerful and valuable stimulant to the uterine system, and is one of the most potent emmenagogues known. It is also a powerful gastrointestinal irritant, and therefore is seldom prescribed alone. But when combined with certain correctives, as it is in Ergoapiol, it becomes a valuable addition to the drugs already named — apiol and ergotin.

Since the discovery of the methods of producing aloin from the different brands of aloes this drug has become very popular, and has taken the place of the crude drug to a considerable degree. Aloin enters into almost every emmenagogue pill and mixture. Its value as a therapeutical agent is so well known that it is not necessary for us to speak of it in detail; yet we desire to say that its addition to the drugs in question aids very materially in making Ergoapiol so valuable a combination. Being a mild stomach tonic, it aids in overcoming the irritable qualities of the savin; also acting as a hepatic stimulant, freeing the portal circulation and relieving the torpid condition of the lower bowel, it goes a great way toward relieving that condition so often present in diseases of women — pelvic engorgement. These qualities make it an ideal adjunct to the emmenagogues mentioned.

Our attention was called to Ergoapiol (Smith) through a reprint from a St. Louis journal. This reprint gave the names of

#### ORIGINAL COMMUNICATIONS.

dies entering into the combination. We at or this product would be a useful one, and secure began prescribing it whenever indicated.

he results were even greater than we had anticipated. Beginning we have kept clinical notes of each case which will be recorded in this article. Ergoapiol is

stomach tonic, anodyne, antispasmodic, and h

It is also a laxative, an ideal emmenagogue in the long term, and exerts a decided tonic influence upon the pelvic viscera. It is indicated to a great extent in all forms of dysmenorrhea, viz., atonic, catarrhal, and membranous. In true obstructive dysmenorrhea, due to actual stenosis of the uterine canal, to a spasmodic action of the organ, or to the valve-like action of a clot or other organic matter, it is not indicated because this form of organic dysmenorrhea requires either surgical operations or mechanical means.

However, good results may be expected from its use where operations have failed to complete a cure or where it is not indicated. It is even useful in the form where clots are expelled by their mechanical obstruction, and we have seen that it may cause the passage of a polyp in one patient. Good results may be expected from its use in that form of dysmenorrhea as membranous, due to an exfoliation of the uterine lining in the form of a membrane. In amenorrhea it is not indicated. Due to any remedy we have yet tried, if the case is not relieved. Amenorrhea due to taking cold at the time of menstruation or caused by shock, can be relieved with this remedy.

This remedy is occasionally beneficial in certain cases of menorrhagia, after operations to remove fungoid growths, or after curetting the uterus. It is a renounce in menorrhagia, especially in that form due to general debility with torpidity of the liver in persons nearing the close of life. This trouble occurs in a plethoric and indolent condition. The plan of treatment will generally be all

Begin three or four days before menstruation with one brisk mercurial purge, then follow with E

capsule three times per day. If this plan is carried out for several months at each menstrual period, a cure will be the result.

Ergoapiol is especially indicated when disturbances of menstruation occur in feeble and anemic women. It should be alternated with some form of iron in such cases.

There is a condition in which the patient's menses are regular as far as time is concerned, but the flow is very scant, exceedingly thick, tarry in color, with an offensive odor. The patient suffers pain and weight in the pelvis and back; is despondent, loses flesh and strength, and may or may not suffer from various reflex disturbances. In this state of affairs Ergoapiol will be found a sheet anchor.

Before recording the clinical notes gathered while prescribing the drug under consideration, we wish to call attention to one or two important things before leaving the subject. The first is that form of amenorrhea that is brought about by constitutional disease, such as tuberculosis. In these conditions it is a common occurrence to have women insist on their physicians giving them something to bring on menstruation, thinking that its absence is the cause of their condition, when the fact is, the stopping of menses is only a wise provision of nature to prevent faster decline of vital forces. The course to be pursued is to treat the constitutional disease, and when a cure of the latter has been accomplished, this form of amenorrhea will generally take care of itself. However, when the patient's general health has been restored and the function fails to return, then Ergoapiol can be prescribed with good results.

Our second subject is that of prescribing emmenagogues indiscriminately without regard to the cause of amenorrhea. Women who know or suspect themselves to be pregnant frequently consult a physician in the hope that, in the attempt to bring on menstruation, he will really succeed in causing abortion. Whoever, under such circumstances, prescribes Ergoapiol with the understood purpose of inducing the menstrual flow, is liable to have criminal charges brought against him in case abortion actually does take place, even as the result of something the woman has taken or done herself. Before prescribing Ergoapiol in amenor-

he physician should satisfy himself that pregnancy does not and in case of doubt he should decline the management of it unless he can protect himself by securing some trustworthy consultant who will share the responsibility of the case.

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## *Records, Recollections and Reminiscences.*

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### THE ANNUAL MEETING OF THE ASSOCIATION OF MEDICAL OFFICERS OF THE ARMY AND NAVY OF THE CONFEDERACY.

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The tenth annual meeting of the Association lacked greatly in what it should have been. This can only be attributed to inefficiency and neglect on the part of the Chairman of the Committee of Arrangements. In this I am confident that I will be sustained by the few who were present. No stenographer was supplied as has been the custom heretofore. The place of meeting was very much out of the way, and although the Hall of the Temple, it was too far from the central portion of the city, *was all* that was arranged for by the Chairman of the Committee of Arrangements, who was only present for a very short and brief periods during the meetings. So far as the other members of the Committee and the citizens of Richmond are concerned, we are confident that nothing would have been lacking if they only been properly instructed and advised by the Chairman of the Committee.

Dr. J. W. C. Steger of Alabama, endeavored to discharge the duties of the Secretary, who was unable to take charge of the meeting but having no assistance whatever, was only able to keep a synopsis of the action of the Association. However, we have prepared the following statement of the meetings, largely made from the reports in the *Richmond Times-Despatch*, and the morning and evening dailies, verified and corrected in accordance to Dr. Steger's notes.

#### FIRST DAY'S SESSION.

The Annual convention of the Association of Medical Officers

of the Army and Navy of the Confederacy began on Thursday morning, May 30, last, in the Street Railway Young Men's Christian Association building, a brief session being held. The body was called to order by the president, Dr. Ernest S. Lewis, of New Orleans, La., a small number of old and new members having registered and being present.

The secretary made several announcements as to registration, application for membership, etc., stating that all surgeons, assistant surgeons, acting assistant surgeons or contract physicians, chaplains, and hospital stewards were eligible to membership in the association, and that it was hoped that all who were eligible would attend the meetings, which would be in the Young Men's Christian Association hall during each day of the reunion.

The Executive Committee of the Association were requested to meet in the hall at the close of the Thursday morning's session.

Dr. Edwin D. Newton, of the Army of Northern Virginia, made a statement as to the first organization of the association, and his remarks brought forth statements from Dr. C. H. Tebault, surgeon general United Confederate Veterans, and Dr. James B. Cowan, of Tennessee, medical director of Forrest's Cavalry.

Dr. Samuel E. Lewis, of Washington, D. C., made a few remarks as to the subject matter of his paper and resolution, which would be submitted to the association at the Friday morning session. This precipitated a somewhat heated discussion, which was participated in by Drs. Roberts, Tebault, Wellford, and Newton, the discussion being closed by Dr. Samuel E. Lewis.

The secretary then made a statement as to membership in the association, and its purposes, reading an extract from the constitution and by-laws. He earnestly requested each member present to assist him in securing a full attendance on the meetings during Friday and Saturday, as some very important historical matters, in which every doctor of medicine in the South is or should be interested, would be discussed. The association, he said, was organized for the purpose of making a correct statement of the work that had been done by the medical men of the South in those eventful years beginning with 1861 and ending with

1865. The association then adjourned until Friday morning.

SECOND DAY'S SESSION — FRIDAY, MAY 31, 1907.

The meeting was called to order by President Ernest Lewis, M. D., of New Orleans, La. Dr. Deering J. Roberts acted as secretary, only about a dozen members being present.

The assembly was opened with prayer by Rev. J. P. Smith, D. D., after which a business session was taken up. Dr. Roberts tendered his resignation, on account of increasing age and pressure of other business, stating that he had served the Association for the past seven years. As much as he regretted it, he felt that in justice to himself and family, he must retire from the office, and that his resignation was unconditional. He then submitted his annual report, which was referred to the following Auditing Committee:—Drs. Jno. R. Gildersleeve, Geo. Ross, and E. D. Newton. Resolution of thanks to Dr. Roberts for his past services and expressing regrets at his retirement were offered by Drs. S. E. Lewis and E. D. Newton, and were adopted. The resignation was accepted, the association regretfully recognizing the causes which led to Dr. Roberts's retirement. Dr. J. W. C. Steger, of Ala., was requested to act as Secretary pro. tem.

Dr. Lewis delivered the president's annual address, a beautiful tribute to the life of the Confederate surgeon. This will appear in the September issue.

An address was delivered by Dr. Stuart McGuire, of Richmond, son of the famous Dr. Hunter McGuire, medical director of Jackson's Corps, on "The Difficulties and Successes of the Confederate Surgeon." This also was a tribute to the work of the army surgeon, and many instances were recorded of notable successes of field operations and daring feats of surgery without even the crudest appliances.

A paper by Dr. Samuel E. Lewis, of Washington, D. C., on the "Treatment of Prisoners of War," which will appear in a subsequent issue of this journal, was read by the author. The following resolution was offered by Dr. S. E. Lewis, of Washington, D. C.,—

*Resolved*, That the Association of Medical Officers of the Army and Navy of the Confederacy request Dr. Deering J.

Roberts to prepare, with the consent of the family, the papers and records of the late Dr. Samuel S. Stout, Medical Director of the Army of Tennessee, and endeavor to have same published by the United States government, the members of the Association promising to use their influence with their respective representatives in congress to secure the publication of these important and valuable historical records. Unanimously adopted.

The Secretary *pro. tem.* was instructed to pay all fees collected at this meeting to the retiring Secretary, to be credited on his account.

A resolution was offered by Dr. S. E. Lewis tendering the thanks of the Association to Gen. F. C. Ainsworth, U. S. A., for preparing and publishing a "Roster of the Confederate Army and Navy Surgeons." Unanimously adopted.

Dr. J. C. Abernathy of Alabama, offered a resolution which was adopted, to the effect that all the papers and discussions that had been read before the Association from its organization to the present time be collected by a committee appointed by the President, and the same be published in book form; the book to be placed in suitable hands for sale. The proceeds of the sale were to be devoted first, to the payment for publishing; second, to reimbursing for any necessary expense and for time employed by the Committee; and third, if any assets remain that they be donated to the Woman's Monumental Association, the widows and orphans of Confederate officers and privates, or any other charitable cause deemed worthy by this association.

The association then adjourned until Saturday morning.

#### THIRD DAY'S SESSION — SATURDAY, JUNE 1, 1907.

The Association was called to order by the President, and the first business was the election of officers for the ensuing year. The executive committee submitted the following, and they were all unanimously elected:—

President, Dr. Samuel E. Lewis, Washington, D. C.; First Vice-President, Dr. E. A. Flewellen, of Georgia; Second Vice-President, Dr. Blair Burwell, of Virginia; Third Vice-President, Dr. I. G. Wilson, of Alabama; Fourth Vice-President, Dr. G. C. Phillips, of Mississippi; Secretary and Treasurer, Dr. A. A. Lyon, of Nashville, Tenn.



## RECORDS, RECOLLECTIONS, AND REMINISCENCES.

Dr. S. E. Lewis was escorted to the chair and presided during the remainder of the meeting.

Dr. T. B. Amis, of Luray, Va., read a very interesting paper giving some reminiscences of his service in the army. This will appear in full in a subsequent issue of this journal.

A resolution was adopted thanking the Y. M. C. A., and Railway and Power Co., for the use of their building.

The Auditing Committee presented the report of the former Secretary and Treasurer, Dr. Roberts, which was found by them to be correct.

The report in full is as follows:—

*To the Association of Medical Officers of the Army and Navy of the Confederacy,—*

MR. PRESIDENT AND COMRADES: I respectfully beg leave to submit the following brief financial report for the last two months:—

Amount due me at last meeting (see former report) . . . .	\$155
Amount paid for printing Certificates of Membership (voucher A) . . . . .	3
Amount paid for circulars and envelopes (voucher B) . .	21
Amount paid for 2,000 one cent postage stamps . . . . .	20
Amount paid for registration blanks (voucher C) . . . .	4
Amount paid for postage during the year . . . . .	1
Total . . . . .	\$206
I received at the New Orleans meeting as dues from members . . . . .	69
Leaving a balance due me at this date . . . . .	\$137

Very respectfully submitted,

DEERING J. ROBERTS, *Sec. and Treas.*

The above report and accompanying vouchers were found correct and it is hereby approved. With the deduction of sixteen dollars from the amount of dues received at this meeting, the Association is indebted to Dr. Deering J. Roberts in the sum of one hundred and twenty-one dollars and eighty-eight cents.

(Signed)

JNO. R. GILDERSLEEVE, *Chairman*  
GEO. ROSS, M. D.,  
E. D. NEWTON, M. D.



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discussions and lectures, and

a sleepless hour with a patient, not alone for the patient's good, but on many occasions mainly to relieve the apprehensions of a fond parent or near relative.

No self-sacrifice was too great for him to make for those confiding in him. He was not only a doctor, but a friend of the family, a careful, sincere, and patient counsellor. The weather was never too hot or too cold, the night too dark for him to faithfully discharge his duty; rain nor shine, snow nor sleet never deterred him from his full duty as a practitioner of medicine. Although not a Scotchman, his prototype has been beautifully portrayed by Ian MacLaren, and he was in fact and in deed a "Weelum McClure."

He was permitted to round out more than "three score years and ten," a little over a half-century actively, earnestly, and sincerely devoting his time to the care of the sick and suffering. He was plain, modest, unassuming, well qualified in his profession, an honest, careful, painstaking "family doctor," whose character, manners, and methods are well worthy of emulation. "From sorrow, toil, and pain he now is free."

Two sons, Rev. Wm. David Kelley of Missouri, and Walter Jennings Kelley of Alabama, and several grandchildren of this city survive him.

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### *Editorial.*

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#### THE DOCTORS GET THE "HOT END OF IT!"

JUST at the close of the last meeting of the Tennessee State Medical Association, the secretary of the State Board of Medical Examiners appeared upon the floor of the house of delegates and stated that "the supreme court of the state had at its January 1907 term passed upon a case involving the collection of a medical account. Because of the fact that the license of the physician suing *had not been registered word for word* by the county court clerk in his book kept for that purpose, the court decided that he could not collect his account. All licenses since January, 1901, have on their face a time limit of three months for registration. If these licenses were not recorded in full by the county court clerk just as a register does a deed, within three months they become void."

He further stated that "there was a bill pending before the legislature

in the nature of an 'enabling act' to rectify this condition of things, providing that all licenses could be 'renewed,' and then recorded by the county court clerk. To have a license 'renewed,' it must be sent to any member of the examining board, who will write across the face of it 'Renewed, this — day of —, 1907,' signing his name thereto; then it is to be registered thirty days from date of 'renewal.' The law allows until June 15, 1907, for all this work." (And now comes into sight the "milk in the cocoanut."—ED. S. P.) The Secretary of the Examining Board then said: "*The fee to be paid the Board for renewal, as fixed by this 'enabling act,' is \$1.00, and to the clerk for registering, 50 cents.*"

He then asked the Association to endorse the bill, and requested that an active committee be appointed to at once visit the legislature, and use their influence in securing its passage, as the legislature was overcrowded with bills, general and private, and would soon adjourn, and that unless prompt and efficient action was taken by the Association, much trouble would ensue. The Association adopted a resolution in accordance with his request and appointed the committee.

He also stated that "in his opinion all licenses, no matter when issued, **MUST** be recorded in full, but only those issued since January 1, 1901, **MUST** be RENEWED, as those issued from 1889 to that date (1901) had no time limit on their face, while all issued since 1901 have a time limit."

With this last statement we took issue on the floor of the House of Delegates, and showed him and the Association very plainly and conclusively, as we thought, that all who had registered under the act of 1889 need give themselves no trouble about the matter. The act of 1889 had necessarily to recognize that all who were then practicing, as entitled to practice medicine and surgery, etc., even those who had no diploma or other certificate or license, or had lost the same, were only required to present two witnesses who would make affidavit before the clerk that said persons had been engaged in the practice of medicine in the county, and the clerk was required to enter or register their names, place of residence, etc., as in the case of those who had diplomas, in the book prepared for that purpose. The act of 1889 could not go back of that year, as that would have been "ex post facto" legislation.

Two years after the passage of the act of 1889 the Board of Examiners began to get in its work, and certificates were issued to all recent graduates of medicine, and licentiates of the Board, among whom were some who had been practicing in other states and had moved to this state since 1889. They were, we suppose, instructed by the Board to take the certificate or license and have it registered by the county court clerk of the county in which they desired to practice. The county court clerks, we assume, simply followed the procedure of the act of 1889, which course we now learn has been declared illegal by our Supreme Court, as re-

ferring to certificates or licenses issued by the Board of Examiners since 1901.

And now, with the so-called "enabling act," as passed at the last session of the legislature, for the neglect of the county court clerks and failure to properly discharge their duty, the doctors of this state who have received certificates or licenses from the State Board of Medical Examiners, and in accordance with the law, carried said license or certificate to the county court clerks of their respective counties, paying the fees required by the board and the clerk, were now required to have the license or certificate "renewed" by any member of the Board of Examiners, and recorded in full by the county court clerk, "paying the fiddler" to the tune of \$1.50, the dollar to go to the board, and the fifty cents to go to the county court clerk.

Now "a simoleon-and-a-half" is a small matter to the newly fledged graduate, so small that the Secretary of the Board of Examiners was so generous as to offer to pay the amount out of his own pocket if any one would say that he could not afford it. We have never heard so far that he has been called upon. However, although it has no bearing on us personally, yet we cannot but feel that injustice has been done.

Could not the trouble have been overcome in an easier, a simpler manner? Could not the legislature have passed an act setting forth the fact, that inasmuch as some of the county court clerks of this state since 1901 had not discharged their duty in accordance with law, many of whom were now out of office and could not be reached by legal or other means, and that as said county court clerks had illegally registered the certificates or licenses presented to them by a number of doctors of the state who had received same from the Board of Examiners, the said doctors having complied with the law in bringing said certificate or licenses to said clerks, as evidenced by the book of registration in the office of said clerks, therefore, all certificates or licenses so registered since 1901 shall and are hereby declared valid and shall be recognized as duly registered, and that all doctors who have licenses or certificates so registered and who may move to another county, and all certificates or licenses hereafter presented, the same shall be registered and recorded in full, in accordance with the laws of 1901 and subsequently up to this date. Ah! but this would have furnished no additional revenues to the Board of Examiners! And why were the doctors taxed additionally for the benefit of the county court clerks, who were personally, or through their predecessors, largely responsible?

To "a man up a tree" it does seem that our very efficient Board of Examiners, who are expected to look out for the proper execution of the laws that have been passed, in our humble opinion, far more largely for their personal benefit, than for the citizens of the good state of Tennessee, ought to have seen into this matter a little earlier; and then could

not an "enabling act" have been passed that would not have been an additional tax upon the graduates, licentiates, or new comers to the confines of our state since 1901?

The matter was brought up in the State Association on the last day of the meeting, the action then taken was necessarily hurried—the time was so short; and the "enabling act" of 1907, is in full accord with all the legislation that has preceded it in this state since the first act was passed in 1889, no benefit has accrued, only to the Board of Examiners and the county court clerks. We say it unhesitatingly, and can unquestionably substantiate the statement, that there are as many "quacks and charlatans," as much "quackery and charlatanism" in the state now, in proportion to population, as there was on any day or year prior to 1889. The action of our Board of Examiners in recent years has been questioned in many quarters, and while personally we have respect and esteem for the members with whom we have had acquaintance, and most positively assure them as well as those with whom we are not acquainted, that there is nothing personal in the statements we have made; but as a citizen of the state, we claim the right to criticize and question the acts and deeds of every or any official in the state that have any bearing upon the public.

Is it possible that the "sop to Cerberus," the fifty cents for the county court clerks, was placed in the "enabling act" for the reason that as a general rule the C. C. C.'s usually have no little "Fluence" in political matters, and would give the weight of same in securing the passage of the "enabling act?" It reminds us of a day way back more than thirty years ago, when practicing in the rural districts of Sumner County. In our rounds we passed by a station on the L. & N. R. R. A construction train was on the siding, and we were hailed by a colored cook at the door of the caboose, "Say, is you a doctor?" evidently being justified by seeing the saddle-bags adorning the flanks of our horse. Replying in the affirmative, he said: "Dars a man in here what wants to see a doctor."

Dismounting and climbing into the caboose, we found a "son of Erin" sitting on a soap box, nursing his right hand in his left. On inspection we found an immense palmar abscess, occupying the entire palm, the result of a bruise from an iron crowbar while at work. Pat was suffering extremely; so, having the cook who hailed me get a pan of hot water and prepare a mush poultice, we freely split open the entire palm diagonally from the lower angle to the upper, giving vent to about three or four ounces of what we called in that day "laudable pus." Immediately immersing his hand in the hot water for about fifteen minutes, relieving the pain, we applied the poultice, and Pat then being more comfortable, "not having slept a wink in the last two days and nights," said: "And docther, fwat do ye charge?" Oh, said I, "About two dollars will do."

Pat reached with his left hand over to the right-hand pocket of his pants, got out his wallet, and extracting a couple of dollars, said as he

handed it over, "And that is joost where ye have the advantage of me; sure I put a knife into you and I have to pay, and you put a knife into me and I have to pay all the same." At a wake some weeks previously he had put a knife into a companion, and had been fined in a magistrate's court.

O yes! the doctors got the "hot end of it;" and the Board of Examiners, they got — well, about, at a rough estimate, some \$600 or \$1,000, or more; and the county court clerks half as much; and the fault was not that of the doctors. Yet, they had to pay "*all the same*."

#### A MIXTURE OR AN EMULSION — WHICH?

WE take the occasion of devoting a part of our editorial space this month to the following editorial by Dr. Jno. K. Scudder, editor of the *Eclectic Medical Journal*, with his quotation from the editor of that staunch and standard journal *The Virginia Medical Semi-Monthly*. We deem comment unnecessary. Dr. Scudder's editorial is headed "DON'T FALL INTO THIS TRAP," and Dr. Edwards in his text makes a similar allusion.

"About six years ago the American Medical Association conceived the bright idea of 'absorption.' This society decided, in its innermost council, to reorganize the various county, district, and state societies, and to allow each of them to become censors over their own membership, and advised them in very shrewd language that they might admit to membership any Eclectic or Homeopath, *providing* he would renounce his sectarian belief. This scheme has proven to be another case of the lamb lying down beside the lion, but the lamb is inside the lion. Many weak-kneed Eclectics and Homeopaths have fallen into the trap, and some of our strongest men as well.

"The following correspondence shows that some of our best men can be wheedled into joining local county societies, and they are being plainly told that they need not renounce their sectarian belief or membership. Lately I addressed the following letter to Chicago:—

APRIL, 11, 1907.

"Editor Journal American Medical Association:

"Dear Doctor: I notice, on page 894 of your issue of March 9th, that Dr. P. D. Bixel, of Pandora, O., had become a member of your Association. Dr. Bixel graduated from the Eclectic Medical Institute in 1901, and in his sworn application to the Ohio State Board of Medical Registration asked that he be classed as an *Eclectic* physician. He is a member in good standing of the Ohio State Eclectic Medical Association, and is secretary of the Northwestern Ohio Eclectic Medical Association.

"In a letter from Dr. Bixel I learn that he was repeatedly invited to attend and join your local society. He was neither asked to sign any



constitution nor state that he did not practice a *sectarian* system. Subsequently he was asked to remit five dollars for your journal, which would entitle him to a certificate of membership.

If I am not mistaken, the printed draft of the constitution, which is issued for the guidance of the local and district societies by your Association, contains the specific clause that an applicant should sign the constitution, stating plainly that he does *not* practice a *sectarian* system.

"The question is, Do you recognize that Eclectic and Homeopathic physicians are entitled to your membership, whilst maintaining their methods of practice, their school affiliations, and their independent opinions? A reply in the pages of your *Journal* will be appreciated.

Sincerely yours,

JOHN K. SCUDDER, M. D.

"Practically the same letter was addressed to the editor of *The Ohio State Medical Journal*. Neither editor saw fit to reply in his *Journal*, but the assistant secretary of the Association in Chicago condescended to write me a letter, stating that the entire question of membership lies exclusively in the county society, practically admitting that they would admit into their high and mighty Association any practicing physician of any belief, even if he did not formally renounce his sectarian belief. This is one of the reasons why they now have a nominal membership of over forty thousand.

"However, all is not well with them. Many of their foremost men and some of the editors of their strongest journals have been kicking vigorously against this new scheme. They say openly that it is not right or honest to either Eclectics or Homeopaths or the Regulars of their Association to expect them to unite in membership under such a loose system. Some editors, who are more bold than others, and are not fettered by the bonds of the high and mighty council of the A. M. A., are very bitter in their remarks, and openly concede that unless it had been for the study and advance made by the sectarian systems along the line of research in *materia medica*, they would not have some of the valuable remedies which they have to-day.

"Landon B. Edwards, editor of *The Virginia Semi-Monthly*, in his issue of April 26th, has written a long article on this subject as concerning the Medical Society of Virginia. He says: 'In the pell-mell flurry to reorganize a few years ago, nearly all the regular state medical societies of the country, under the influence of a *fanaticism* which was remarkable in its results, fell into the trap. The "plan" offered some most plausible features, and these were presented in such a way as to cause some to lose sight of the ulterior effects. Whatever may be said in favor of the general reorganization plan, it yet remains that the time is not ripe for the amalgamation of the different schools of medicine. Where one holds to the tenets of the Homeopathic, or the Eclectic, or other distinctive

school of practice, *let him remain in his own field of practice*, as much as the different denominations of Christians.

"*We are not in sympathy with the idea of amalgamation of these different schools of practice into a common fraternity. If one is an honest Homeopath or Eclectic, etc., let him remain true to his own school.* But there are some fields common to all—such as matters of public hygiene, certain legislations, etc—when it may be proper to hold conferences of all the schools for a common good, just as the denomination of churches may from time to time hold "ecumenical councils," etc. But when the purpose for which such conferences is accomplished, let each school or denomination return to its own legitimate work."

### THE PATHOLOGY AND TREATMENT OF HAY FEVER.

ONE of the most striking pathological features of this malady is a turgescence of the turbinal tissues due to extensive dilatation of the capillaries. That this is the result of an angioneurosis, involving a more or less pronounced local vaso-motor paralysis, is pretty generally conceded.

In the treatment of hay fever with Adrenalin Chloride it has been suggested that weak solutions, frequently applied, are apt to yield better results than the occasional application of strong solutions. The application of the solution of Adrenalin Chloride stimulates the vaso-motor supply, resulting in a contraction of the capillaries. Overstimulation, by reaction, is very sure to result in a complete paralysis of the vaso-motor supply in the region affected. On the other hand, gentle stimulation with weak solutions is not so likely to be followed by a reaction.

Solution Adrenalin Chloride (1:1000) may be diluted with normal salt solution and sprayed into the nares and pharynx.

Adrenalin Inhalant may be preferred to the aqueous solution, for obvious reasons. This product contains one part of Adrenalin Chloride in one thousand parts of an aromatized neutral oil base, with 3% Chlorotone. It is vaporized by means of a nebulizer.

Adrenalin Ointment may be applied to the turgescient nasal mucosa by means of a cotton applicator. Henry Guy Carleton (*Therapeutic Gazette*, June, 1907) says that "Relief can be accomplished more quickly by smearing one or two minims of ointment containing 1:1000 of Adrenalin between the brows and half way down the side of the nose than by the inunction and spraying of the nasal mucosa." The *modus operandi* is explained as follows:

"The effect is to allay the irritation of the supraorbital, supratrochlear, and infratrochlear, and frontal nerves, and the superior and inferior nasal, the nasal rami of the superior maxillary, and the nasopalatine nerves, all of which are involved in a severe attack. Those rami in the

posterior nares which may be affected will be relieved simultaneously, exactly as all branches of the supraorbital affected in a supraorbital neuralgia are relieved when an application of Adrenalin Ointment is applied only to the supraorbital foramen."

Messrs. Parke, Davis & Co. issue a brochure on the treatment of hay fever, which will be sent gratis to any medical man upon request. We suggest to our readers that they send for the brochure, as hay fever is an exceedingly important and timely subject.

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WHAT MORE COULD YOU EXPECT FROM "A FLY-UP-THE-CREEK?"—In an editorial in the *Jour. Am. Med. Ass'n.*, of June 15th, ult., referring to the President-elect of the Association, it is stated that "He was probably the first to make a successful ligation of the innominate artery." A communication dated June 17th, ult., from an old personal friend and comrade who was Senior Surgeon of Bate's Brigade and under whom we served in the 60's calls the attention of the secretary-editor to the erroneous statement, citing Smythe's case in New Orleans over forty years ago and also alludes to the cases of Valentine Mott, and von Graefe, the patient of the former surviving nearly four weeks, and the latter one over two months. The "Answer" to the letter of Dr. Joel C. Hall, of Anguilla, Miss., in the *Jour. A. M. A.* of July 6th, is as follows:—

"In making the statement we were aware of the work of Mott and von Graefe, so nearly successful, but we overlooked Smythe, and we are glad to give credit where it is due and to thank our correspondent for calling our attention to this point.

"Since writing the above reply a letter has been received from Dr. Hubert A. Royster, Raleigh, N. C., calling attention to the same point."

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THE RUTHERFORD COUNTY MEDICAL SOCIETY met at the office of Dr. W. C. Bilbro, Murfreesboro, Tenn., Wednesday afternoon, July 3.

Dr. A. J. Jamison read an essay on the subject of Ileocolitis, which was discussed by the members present.

Dr. Rufus Pitts read some clinical notes on the same subject, taken in New York Polyclinic Medical School and Hospital, which were discussed by Drs. W. C. Bilbro and J. B. Murfree.

Physicians in attendance at this meeting were Drs. J. B. Murfree, M. B. Murfree, W. C. Bilbro, A. J. Jamison, Rufus Pitts, S. C. Grigg, and R. D. Vaughn. The essayists for the meeting of July 17 are Drs. J. B. Murfree and E. M. Holmes.

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CODEINE SAFETY AGAIN DEMONSTRATED.—Dr. E. L. McKee, of Cincinnati, Ohio, speaking of codeine in the *Denver Medical Times*, says: "This drug, according to Butler, is one fourth as toxic and effective as morphine. It is less depressing and more stimulant, does not consti-

pate, cause headache or nausea, and rarely leads to the formation of a habit. Codeine seems to exert a special, selective, sedative power over the pneumogastric nerve, hence its value in irritative laryngeal, pharyngeal, and phthisical coughs with scanty secretion. Like morphine, it has proved of value in checking the progress of saccharine diabetes, and it has been used for long periods without the formation of the drug habit, inasmuch as when glycosuria was brought to a termination by dietary and other measures, the cessation of the use of codeine was not followed by any special distress. The effects of codeine on the alimentary canal are remarkable, in that it assuages pain as well or better than morphine, and nevertheless does not check the secretions or peristalsis notably, unless the latter is excessive, as in dysentery. The statement that codeine is simply a 'little morphine,' only differing from the latter in the size of the dose, is an erroneous view, as can be ascertained by any one who closely observes the action of the two drugs."

Codeine in connection with antikamnia has stood the test of exhaustive experimental work, both in the laboratory and in actual practice, and they are now accepted as the safest and surest of this class of remedies. Therefore, "antikamnia and codeine tablets" afford a very desirable mode of administering these two valuable drugs. The proportions, antikamnia 4 3-4 grs., codeine 1-4 gr., are those most frequently indicated in the various neuroses of the larynx, as well as the coughs incident to lung trouble, bronchial affections, grippal conditions, and summer colds.

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MEATOX, or *Granulated Dry Beef*, is a concentrated nitrogenous food made of pure lean beef. It is absolutely free from preservatives, and it keeps indefinitely even in unsealed containers.

Meatox is different from the so-called Meat Juices or Meat Extracts in that it contains all the nutritive elements of beef,—namely, assimilable proteids, which are the nutrients, whereas the Meat Extracts merely represent the stimulant parts of beef.

Meatox is of pale yellow color, possessing a faint odor of meat and an agreeable flavor imparted by celery seed. In this respect it is superior to the Extracts of Beef which possess a strong and peculiar odor and, being merely stimulants do not contain the nourishing elements the patient's case requires. Meatox contains from 73 to 75 per cent. of proteid matter which is readily assimilable.

Good lean beef contains from 16 to 20 per cent. of proteids, and Meatox on the other hand contains from 73 to 75 per cent. of proteids. One pound of Meatox contains the nutritive substances (proteids) of from 4 to 5 pounds of lean, boneless beef, or about 10 pounds of ordinary butcher's meat with the bones and fat. The presence of this high percentage of proteid matter commends the use of Meatox as a dietary necessity to the discriminating physician.

THE PREGNANT FEMALE requires constant care—and good care—both before and after the birth of her offspring. To trust to nature alone to pilot an expectant mother through the perilous voyage of pregnancy with its many constant dangers,—and often unexpected storms,—is to trust too much to a pilot who may be worn out and weakened by the stress of circumstances.

The careful physician, like the wise sea-captain, takes no chances. They both realize that pilots need not only rest, but often substantial assistance. So the doctor fortifies and strengthens nature by the judicious use of effective tonics; and herein lies one of the principal indications for Gray's Glycerine Tonic Compound.

This reliable tonic is practically the only remedy that is never contra-indicated during pregnancy, the puerperium, or the period of lactation. Its routine administration throughout minimizes the dangers of a trying ordeal, and robs it of much discomfort and distress. During lactation it can be given with marked benefit, and the baby shares equal profit with the mother.

The Purdue Frederick Co. will be pleased to send on request samples for careful test in this class of cases.

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DRS. HAYDEN AND BROWN have had a most satisfactory success in the management of their *Sanitarium* for the treatment of alcoholic and drug addictions. Opening their institution in this city only a little over a year ago, they have for some months had every room occupied, and now are overcrowded, so that they will be compelled to enlarge the building now occupied or seek more roomy quarters.

Their success in relieving by scientific methods those unfortunates who are desperately addicted to the harrassing poisons of alcohol and narcotic drugs has been most satisfactory. Their business is conducted on strictly ethical lines, and they are well worthy of the support of regular members of the profession who may have patients needing the treatment that can only be obtained in a well arranged and ordered sanitarium. Well supplied with all modern appliances, a resident physician always in the house, wide experience, and well-trained nurses, with reasonable and moderate terms, they have merited the success achieved.

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"A GENERAL ALL-ROUND TONIC."—In the convalescent stage following any debilitating disease this preparation stands pre-eminent. To secure the desired results, Fellows' Syrup should be taken regularly and persistently for a period of one month. As a constitutional remedy, it effects a permanent restoration of health, not merely a temporary relief, and produces no bad reaction of over-stimulation so common in many so-called restoratives. Keep the bottle corked and protected from sunlight.

**PRICKLY HEAT.**—Many specifics have been advocated as a sure cure; very few, however, have been found satisfactory. An exception may be claimed in favor of Tyree's Antiseptic Powder, says Dr. M. E. Chartier, Faculté de Paris, France, as it possesses curative as well as preventive properties. Besides, it is quite inexpensive, five or six tablespoonfuls of the powder in a gallon of water are quite sufficient for an ordinary sponge bath, which will act as a preventive. A larger percentage may be necessary to cure the most troublesome case. There are to be found in the drug stores many preparations containing boracic acid and talcum compounds. These preparations, generally used in a dried state, have the great inconvenience of clogging the pores of the skin. This is not the case with Tyree's Antiseptic Powder, as it acts as a deodorizing, stimulating agent. Sample and particulars from J. S. Tyree, Chemist, Washington, D. C.

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**THE THREE AGES OF WOMAN: THIRD STAGE.**—With the climacteric the sexual life of woman is brought to a close, and is considered by some authorities as the most critical era of her existence. Various disturbances of the circulatory, nervous, and digestive systems, as well as of the pelvic organs, are usually characteristic of this period and are manifested many times by hot flashes, headache, melancholia, vertigo, neuralgia, etc.

For its calmative and sedative action upon the nervous system, as well as for its normalizing effect upon the vaso-motor system, Hayden's Viburnum Compound seems to have proven, as a result of twenty-six years of clinical investigation, to be a most satisfactory remedy from a therapeutic standpoint for administration just preceding, at the time of, and following the menopause.

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**SAL HEPATICA** has been found specially serviceable as a safe laxative and eliminant of irritating toxins resulting from fermentation or decomposition of food, in inflammatory conditions of the bowels, affording prompt relief in stomachic and intestinal indigestion, colic acute or summer diarrhea of either adults or children. It is remarkably free from any griping tendency, owing to its antacid and soothing properties. From repeated trials we have found it most excellent and cordially commend it. The Bristol-Myers Co., 277 Greene Ave., Brooklyn, N. Y., the manufacturers, offer to send liberal samples to physicians, upon request.

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**THE NEUTRALITY AND GENERAL PURITY** of the salts entering the composition of Peacock's Bromides have been attested to by eminent chemists. This assurance in its purity and uniformity is of great moment to the general practitioner when he desires to employ a continuous bromide treatment. It is a palatable preparation, and as each fluid drachm contains fifteen grains of the combined bromides the dose is easily adjusted.

'RAH FOR DAN'L'S AND THE RED BACK.—This issue completes my twenty-second year. The "Red Back" will begin its twenty-third volume next month, and it enters upon the year with renewed courage, and determination to hold aloft, as it has steadfastly done nearly a quarter of a century, the banner of legitimate, ethical, scientific medicine, and defends the same against all assaults of the enemy, the world, the flesh, and the devil. It is my nature to rise with opposition,—and knowing that the cause is righteous and must prevail, and backed and sustained by the continuous support of the cleanest and best men in the profession, I will strike so long as God gives me strength to wield a weapon. I renew my thanks to the Old Guard and bid them be "steady on the left."—*Texas Medical Journal*, 1907.

Ah there! Shake, Old Pard, Shake! I'll try and be with you on the right.—ED. S. P.

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LYNNHURST SANITARIUM, at Memphis, Tenn., is a private home designed expressly for the care and treatment of select cases of the various nervous and mental diseases, such as neurasthenia, melancholia, hysteria, chorea, epilepsy, and mild mental cases, alcoholic and drug addictions. Separate buildings for male and female patients. Delightfully located on extensive private grounds; furnished with every needed convenience, and equipped with modern and approved medical appliances for hydrotherapeutics, electricity, hot-air baths, manual and mechanical massage, etc. Experienced nurses in attendance, and individual treatment given to each patient.

For further information and terms write to S. T. Rucker, M. D., Supt., Raleigh Ave., Memphis, Tenn.

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"TOBACCO HEART."—This trouble comes under the head of cardiac neuroses. The innervation of the heart is disturbed, its action is weakened, irregular, and intermittent; palpitation, precordial pains, faintness, and vertigo are the consequences. The use of tobacco should be inhibited and a Cactina Pillet given every two or three hours, as the occasion demands. The patient will not only be benefited, but permanently cured if the treatment is continued for some time.—*Charlotte Medical Journal*.

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DR. PAUL CLEMMONS, formerly of Nashville, Tenn., a graduate of the Medical Department of the University of Nashville, who has been serving as surgeon in the Philippines, has been elected to a professorship in the University of Manila, and will sail for that place September 1.

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ALETRIS CORDIAL RIO is an efficient uterine tonic and restorative, and is a preparation for which nothing can be substituted.

THE INTERSTATE MEDICAL JOURNAL (St. Louis) announces the purchase of the *St. Louis Courier of Medicine*, one of the oldest medical journals in the West, and its consolidation with the *Interstate* on July 1.

The *St. Louis Courier of Medicine* was established in 1879 by an association of prominent St. Louis physicians. This merger removes from the field an old and highly esteemed contemporary, and its consolidation with the *Interstate* adds strength and prestige to that periodical. This is the fourth medical journal that has been purchased and absorbed by the *Interstate* during the past few years.

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Louisville, Ky., Oct. 11, 1906.

*The Anasarcin Chemical Co., Winchester, Tenn.*

Some time ago I received a sample of your tablets, and I am glad to inform you that they have proved very satisfactory to me. Have found several occasions to prescribe them and recommend them very highly. I would appreciate another sample if you care to favor me.

Very truly yours,

JOHN D. CARPENTER, M. D.

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"ROBINSON'S LIME JUICE AND PEPSIN" is an excellent remedy in the gastric derangements particularly prevalent at this season. It is superior as a digestive agent to many other similar goods. (See page 17, this issue).

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## *Selections.*

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AN IDEAL METHOD OF TREATING RHEUMATIC CONDITIONS.—The accurate determination of the exciting factor of rheumatic conditions, and, in fact, most of the errors of metabolism, has not yet been reached. We know of many predisposing factors, such as heredity, deficient elimination, sedentary life, consumption of an excess of nitrogenous food, especially when associated with alcohol, etc., etc., yet it cannot be denied that we have made by far more progress in the therapy of these conditions than in the determination of their etiology.

Chemical and physiological experiments, pathological examinations, and the most careful clinical observations—all have failed to accord rheumatic and gouty processes a definite and accurate position, as far as their exciting cause and correct etio-



ology are concerned. Based upon our knowledge of the signs of defective metabolism that accompany the various stages of rheumatic processes, we advise our patients to modify their diet, stimulate their emunctories by attention to exercise, baths, the drinking of quantities of water, and giving proper attention to the gastrointestinal tract.

In my opinion, however, the nearest approach to therapeutic accuracy in some of these conditions that we have reached, is in the employment of colchicine internally and the external application of the oil of wintergreen. For some time past I have used colchicine in the form of colchi-sal capsules, which contain the equivalent of three minims of pure methyl salicylate from *betula lenta*, and 1-250 of a grain of crystallized colchicine with 1-500 of a grain of the active principle of *cannabis indica*. These capsules I have found to be absolutely reliable. For local swellings, as in acute arthritis of rheumatic origin, in gouty attacks, in myalgias, especially lumbago, torticollis and pleurodynia, as well as in sciatica, I have invariably employed the mentho-methyl-oleo-salicylate known as betul-ol. Its peculiarly efficient power of penetration and analgesic properties have stood me in good stead. The following cases indicate the value of these drugs:—

*Case 1.*—Mrs. K., a German woman, aged forty-four years, was of good health with the exception of rather frequent attacks of acute arthritis of rheumatic origin. She had taken salicylic acid in various combinations, and had frequently used liniments containing oil of wintergreen—at least, the prescriptions called for *ol. gaultheriæ*. I modified her diet, prescribed baths and saline laxatives, and ordered her to take one capsule of colchi-sal every hour for one day, one every two hours on the second day, and one every four hours for a period of a week. Locally, I ordered betul-ol applied by means of gentle friction for five minutes by the watch, twice daily. In ten days all symptoms disappeared, and for the past five months have not reappeared. In addition to the disappearance of the pain and swelling, she has gained in weight and has improved much in energy and spirit, factors which so often go hand in hand with improvement in lithemic conditions. I have advised her to take one capsule three

times daily for one week during each month, to prevent recurrence.

*Case 2.*—Mrs. R., aged thirty years, widow, consulted me for very acute pain in the left side. She had had pleurisy two years before. Examination showed the pain to be located in the muscles; in short, a typical case of myalgia. I prescribed colchi-sal capsules to point of tolerance, and ordered betul-ol to be gently rubbed over the painful area twice daily. The pain disappeared in three days. It had been my practice to strap the chest in these conditions, with great benefit, but a patient otherwise in good health, as a rule does not like the strips around the chest. I have found the above-described procedure a valuable substitute, with the additional value of preventing further attacks.

*Case 3.*—Miss A. L., aged nineteen years, was attacked severely with acute rheumatic fever. Both knees were greatly swollen, and her general condition was very poor. She had a number of successive drenching sweats. Her temperature fluctuated between 101° to 104° F., and at one time threatened to reach a point of hyperpyrexia.

It had been my custom up to the time of this case, to administer salicylate of sodium internally and apply equal parts of oil of wintergreen and olive oil locally to the inflamed joints. In this case, however, I ordered colchi-sal capsules, one every hour for twenty-four hours, and one every three hours thereafter. Locally, I applied betul-ol and olive oil, equal parts, and covered the inflamed joints with lamb's wool over oiled silk. With each capsule of colchi-sal I ordered a glass of cool Vichy to be given, and confined the patient to a milk diet. The case made a rapid, uneventful, and uncomplicated recovery.—*M. R. Dinkelspiel, M. D., Ex-Resident Physician Philadelphia Hospital, in International Therapeutics, October, 1907.*

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#### ANTISEPTIC LIQUID SOAP.—

℞ Saponis Mollis  
Katharmon  
Aquæ ..... aa ℥ iv  
Alcoholis ..... ℥ iij  
Misce et adde  
Acidi carbolicæ ..... ℥ j

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***Original Communications.***

ASTHMA, ECZEMA, HEADACHES, RHEUMATISM,  
GOUT, ETC., AND URIC ACID.

BY P. P. MAUK, M. D., TOLEDO, OHIO.

"From the cradle to the grave" a considerable portion of the human race is more or less subject to certain pathological conditions, of markedly varying types as to their clinical manifestations, yet each and all largely due to a like etiological factor. Uric acid in certain amount is a normal constituent of the secretions, being found in the blood and tissues of all warm blooded animals, and is duly eliminated with other excretions. When we find the amount eliminated bearing a definite proportion to urea, which is normally excreted by the kidneys, this proportion being about from 1 to 30, to 1 to 35, the series of disease conditions embraced in the title of this paper, together with some others to which perhaps

we may make but brief allusion, are of but little moment to the practitioner and his clientele; but these we propose to consider are of almost daily, if not more frequent occurrence, often sadly annoying, troublesome, and trying to the patience and endurance of both practitioner and patient.

Under certain conditions, inherited or acquired, we find a more or less considerable departure from this definite proportion of uric acid and urea; the one or the other condition having been produced by the metabolism of the tissues and fluids, or the nitrogenous elements of elimination in excess; or a diminution in their elimination by the emunctories, this elimination being due to the greatest extent to correct renal activity.

Urea is the most constant and abundant organic constituent of urine, having a chemical equation of  $C H_4 N_2 O$ , and being the main nitrogenous excretion of the body, it is the index of nitrogenous waste, either as to food or tissue; its average amount per day in a healthy man of 160 pounds being about one ounce. Uric acid is found in the urine of carnivora; in the herbivora being replaced largely by hippuric acid. Uric acid, as a rule, is found in combination in urine, in the form of a mono-urate, a bi-urate, or quadri-urate of some alkaline base. Free uric acid is so insoluble that whenever it exists in urine it is as a rule a precipitate. Its chemical equation is  $C_2 H_4 N_4 O_3$ . Its accumulation in the human economy above the proportion to urea of 1-30 or 1-35 (*uricacidemia or lithemia*) produces various morbid phenomena as already stated.

Near the middle of the seventeenth century Sydenham wrote his memorable work, which has ever since remained classical. He was a sufferer from gout for years, his most severe attack occurring on the completion of his work, in which he said of gout that it "was due to the impaired concoction of matters both in the parts and juices of the body." A little over a century later, Stoll divided all inflammations into *rheumatic*, *bilious*, and *septic*, and although Tennant and Pearson in 1795 found that gouty concretions were formed of urates, Garrod, a little over half a century later, was the first to call attention to the fact that the blood of gouty patients contained an excess of uric acid.

While Sir Alfred Garrod and the late Austin Flint, Sr., regarded rheumatism as a self-limited disease, yet to the former was due the credit of originating the alkaline method of its treatment, which, notwithstanding the many advocates of the salicylates in later years, still retains the confidence of some of our ablest clinicians. Sir Alfred Garrod in his work on "Gout and Rheumatic Gout," third edition, p. 6, says: "Galen, who lived about the latter half of the second century, was of the opinion that gout was caused by some unnatural accumulation of matters in the part affected. These matters were supposed to consist of phlegm, bile, blood, or a mixture of these fluids, and chalk-stones were considered to be formed by their concretion or solidification." On the preceding page he makes this statement: "It is by no means rare to hear of inflammation of a joint called by one practitioner gout, by another rheumatism, and by a third rheumatic gout." Further on in his work, he says, "The causes which predispose to gout independently of individual peculiarity are either such as produce some increased formation of uric acid in the system, or lead to its retention in the blood." Finally, in the Lumleian Lectures (*British Medical Journal*, 1883, p. 549), he makes this interrogatory: "May it not be the case that when uric acid exists in the blood it is attracted differently to different organs?"

Our indebtedness is, however, for the greatest part due to Dr. Alexander Haig of London, who, beginning in 1884, had up to 1892 presented through the pages of various journals, transactions, and reports, some twenty-five articles or papers, when he embodied them in a most excellent volume entitled "Uric Acid as a Factor in the Causation of Disease," together with such alterations and additions as further experience had suggested. This valuable work has rapidly passed through a number of editions, from which we have derived much help, and from which we beg leave to submit some very pertinent quotations.

In the preface to his first edition he says: "As my investigations tend to show that the functional and organic disorders of which I speak are in so many instances due to an excess of uric acid in the body and blood, this is practically a work on the causation of disease by uric acid, of the process by which it comes to

be present in excess in the body, and the means of preventing such excess." In the functional and organic diseases considered in the work, are included headaches, rheumatism, and gout.

In the preface to his fifth edition, issued some eight years later, after mentioning the "enormous advances which the subject had made," he says: "But the power of measuring in a few minutes the quantity of uric acid in the blood, and in even a shorter time the effect of that uric acid on the capillary circulation and the blood pressure, has placed the matter on an entirely new foundation, and it is now evident that to measure the capillary circulation is to measure the uric acid in the blood, so intimate is the relation between them.

"As a result of these new discoveries, my control over the capillary circulation and its resultant blood pressure is now almost absolute, and as nine tenths of the diseases treated of in this volume are due to changes in the blood and its circulation, my power over these has increased or is increasing to an enormous extent; a fact which I greatly rejoice over, as I have always held that power is the best index of truth."

"Many diseases previously obscure now seem very likely to acknowledge a circulation origin, as the circulation conditions they present can be measured with greater ease and accuracy; and though I have been accused of claiming too many diseases for uric acid, I think the future will probably demonstrate that I have not yet claimed enough."

Dr. Haig, considering uric acid as an inclusive term, comprehending its salts, places great stress on its influence on blood pressure and pulse tension, these having a direct influence on capillary action, on which is dependent normal repair and waste of tissue, as well as normal function of organs. In chapter IV. he says, "From the clinical history of the uric acid headache we learn that at the time of the attack, when there is excess of uric acid in the blood and in the urine, the pulse is generally slow and of high tension;" and after stating "that obstruction of the capillaries varies directly with the uric acid that is circulating in the blood," he lays down the following two postulates:—

"It follows from this that all drugs and disease processes

which diminish the excretion of uric acid and clear it out of the blood, will lower blood pressure and improve the circulation through all the organs and tissues of the body."

"Conversely, drugs and disease processes which increase the excretion of uric acid and bring it through the blood in increased quantity will raise blood pressure, and diminish or hinder the circulation through all the organs and tissues of the body."

Having been a sufferer from migraine nearly all his life, Dr. Haig's observations are largely from a personal standpoint, relying upon Haycraft's process for estimating the amount and proportion of uric acid, including the alloxans — xanthin, hypoxanthin, and other leucomaines derived from alloxuric bases. His personal interest in lithemia and his very thorough study and investigation of the production and effects of uric acid, have added greatly to our success in treating the various diseases we have now under consideration. With these general remarks, we will now take up a brief consideration of each one separately.

#### ASTHMA.

There is such a diversity in the pathological views presented by different accepted authorities, that we cannot but think that its true condition has not yet been definitely determined, unless we accept the very positive statement of Haig (op. cit., 5th edition, p. 380): which so far as our own observation goes is most entitled to credibility. He says: "Asthma is due to uric acid in the blood and the high blood pressure it produces." His argument, as brought out in the thirty pages of his work on "Asthma and Bronchitis," we regard as far more logical than any other views extant.

Dr. John North, of Toledo, Ohio, in a paper presented to the Mississippi Valley Medical Association in 1901, states that "Asthma has frequently been observed to alternate with those diseases that are generally attributed to the uric acid diathesis," in which he includes gout, rheumatism, migraine, etc. He further says: "Uric acid or oxalates in the blood may act as the exciting cause, in addition to producing sensitive nerve centers."

These views we can far more readily accept than the "hyperemia" of Traube, the "diffuse hyperemia" of Clark, the "vasomotor turgescence" of Webber, or the "respiratory neurosis,"

"reflex neurosis," etc., of others. Furthermore, the treatment, outside those measures to temporarily relieve the paroxysms, those that look toward preventing a recurrence, are such as correct the blood pressure and the lithemia. The iodides, alkalies, and the regulation of the diet advised by able clinicians, produce their beneficial effects upon the lithemic condition, which we can but regard as the most potent etiological factor. With a pathological condition of the blood, the active or exciting causes may be both diverse and numerous; and without this abnormal condition of the vital fluid any or all are inoperative, whether mechanical, chemical, or bacterial.

We will not enter into the semiology of asthma, or any of the other conditions under consideration, as medical men who would be interested in this paper are sufficiently familiar therewith; however, we will here submit a brief quotation from Hare's "Practice," first edition, 1905, p. 407, not as an aid to diagnosis, but as confirmatory of the correct views of Dr. Haig. "*The urine*," says Dr. Hare, "during an attack is often scanty and heavily loaded with urates, but after the attack it is often passed in large quantities, and is clear and limpid." This observation is a very common one, as seen by clinicians and recorded by authors, and it is fairly good evidence, in our opinion, that the uricacidemia and its effects on blood pressure and pulse tension produces definite effects in the development and culmination of the attack, which may have been excited by some influence of chemical, mechanical, animal, or bacterial origin; the effect on the blood and circulation subsiding, the relief of the asthma is accompanied by a marked change in the renal excretion, as to both quantity and quality; and this may have been either causative of the relief or its effect.

This very able and distinguished therapist, stating in the first paragraph of his article on asthma, that the "spasm of the bronchial muscle fibers and the hyperemia of the mucous membrane depend upon a neurosis," offers on page 409 the following prescription, "both as a preventive remedy and a cure for individual attacks, and has gotten results from it which cause him to regard this formula with considerable favor." He further



says: "It is now placed on the market by all large manufacturing druggists." This is the formula:—

R	Sodii iodidi .....	gr. ij
	Potassii bromidi .....	gr. ij
	Ext. euphorbia piluliferæ.....	m. iij
	Nitro-glycerini .....	gr. 1-200th
	Tr. lobeliæ .....	m. ij

Ms. Ft. in tabl. vel capsul., No. 1.

Sig.: One every 4 to 6 hours.

The alkali in the sodium iodide and the bromide of potash, together with the iodine and the other components seem, to us, far more applicable to the correction of a blood dyscrasia, such as uricacidemia and its effect on the circulation; than to a *neurosis*, pure and simple. However, we will refer to the treatment more fully in a subsequent part of this article.

#### ECZEMA.

The following definition as given by Dr. H. H. Whitehouse, in "Buck's Hand-Book of the Medical Sciences, edition of 1901, Vol. III., p. 708, is about as good as any, fairly well covering the ground. He says: "Eczema is an acute or chronic inflammatory disease, presenting a most varied assortment of cutaneous lesions, and accompanied by more or less intense itching, burning, or pain. The lesions consist, at first, of erythema, papules, vesicles, or pustules, which may subsequently form into crusts or weeping surfaces, or infiltrated and scaly patches."

We might go on and give a number of authorities sustaining the view that eczema is a result of uric acid and its effects on the blood and circulation; however, we submit the following extracts from a pamphlet by Dr. A. B. Conklin, of Ambler, Pa., which are in our opinion quite ample. They are as follows:—

"Professor Whitacre, of Cornell, also considers 'eczema a disease of debility,' and in his opinion no healthy person ever had eczema. 'Even in those cases in which the disease is dependent on local causes alone there is always some constitutional defect which enables these causes to become operative.'"

"The late N. S. Davis, of Chicago, for years looked upon uricacidemia as a cause of eczema. Professor Hyde personally

assured the writer that he considered lithemia a common cause of eczema, and the results obtained from antilithic treatment, in his hands, confirmed this belief. A Van Harlingen says: 'The occurrence of gout and rheumatism may be mentioned among the etiological factors of eczema. In certain persons the presence of an excess of uric acid in the system is sufficient to produce and keep up eczema.' "

Dr. Conklin also refers to L. Duncan Bulkley and Huntington Richards of New York, Professor Rachford of Cincinnati, G. P. Katzenstein of Philadelphia, and others holding similar views, which have fully accorded with our own observations, and only by bearing this in mind have we had any success in treating this disease.

#### HEADACHES.

Dr. Haig's personal experience, and his deductions as set forth in his most valuable work (op. cit.), are so clear, lucid, and logical that we deem additional support unnecessary; however, the following statement from Dr. Allan McLane Hamilton, in one of the "Physician's Leisure Library Series," Geo. S. Davis, Publisher, Detroit, Mich., 1888, page 65, is in itself to our mind conclusive:—

"An experience of many years has taught me that lithemic poisoning is at the bottom of many functional diseases, as well as some organic ones. Its effects are shown in a multitude of perversions of sensibility, and even motility, and the importance of toxemia due to retained nitrogenous substances is too often unrecognized or disregarded.

"Many individuals of a gouty habit, without actual classical gout, but with a thousand and one erratic symptoms, are the subjects of headaches which readily disappear when a proper alteration of habits and food is made and when they are placed upon remedies of a suitable nature."

And again on page 67, same publication, we find the following: "There appears to be retention of uric acid before the headache, excessive excretion during the headache, and diminished excretion after the headache. The excess during, balances the diminution before and after; there is no absolute excess of uric acid,

hence the previous equivocal results. During a headache there is little or no alteration of the excretion of urea. The theory which best explains everything in this connection is that of diminished alkalescence of the blood. A dose of acid, either introduced from without or formed internally, may cause temporary retention of uric acid, and so, lead to headache."

#### RHEUMATISM AND GOUT.

As this paper is becoming longer than was at first intended, we will consider the last two conditions jointly, more especially so, as it is now the general consensus of medical opinion that there is no question and has been none for years, as to the relation of uric acid to these diseases, comprehending acute and chronic rheumatism, rheumatoid arthritis, and the various forms of gout.

It is unquestionably established that there is a large class of diseases resulting from chemical errors of metabolism, caused by the introduction from without, or by generation in the economy, of substances increasing, diminishing, or changing oxidation so essential to its special working. In the normal constitution of healthy blood, it is imperative that an exact balance be maintained in the nutritive processes of various tissues and organs. Each part being to some extent an excretory organ to some other part or parts. If the muscles do not take material for their nutrition and consume it by action, it may result in an excess of fibrin and their other constituents in the blood; if the bones do not do likewise, the salts of lime may be in excess, and so on.

The presence of some given constituent of the food, and the existence of any condition affecting proper metabolic changes in the tissues or fluids, preventing the appropriation of new materials for the construction of healthy blood, disturb chemico-physiological equilibrium. Experience has shown that gout and allied affections are met with in those addicted to an over-indulgence in nitrogenous foods, fermented alcoholic drinks (wines, ale, and beer), and in those given to sedentary habits; these conditions being intimately associated with the presence of uric and oxalic acids in the blood and their manifestations. In healthy blood there is a little less than three per cent. of fibrin, while in rheumatism it may be increased to ten per cent. A sedentary life

retards metamorphosis in the economy. Under such conditions, if urea, carbonic dioxide, ammonia, etc., represent the full oxidation of the proteids in the body, anything short of this will result in the production of intermediate compounds. Uric acid, if in excess, must be further oxidized, or owing to its insolubility, it will be retained as such or combined with alkaline bases.

When uric acid is subjected to the action of oxygen, it is first converted into alloxan and urea; additional oxygen acting on the alloxan resolves it into oxalic acid and urea. The various excretions are removed by the emunctories, and these excretions must be in a certain chemical condition, or they are imperfectly removed and remain as abnormal disturbants.

In physiological chemistry the alkaline salts constitute the most important principles effecting or aiding in oxidation; vegetable acids are converted in the system into carbonates for this purpose: the malic acid of the apple, berries, and other acescent fruits are changed rapidly in the system into alkaline carbonates, and the citric acid in the lemon, even before leaving the stomach, is converted into alkaline carbonates, and I always advocate the liberal use of lemonade, hot or cold, in these affections, especially in rheumatism.

As to the bacterial factor in rheumatism, as well as in some of the forms of eczema, although it has not been demonstrated in the first-mentioned disease, I am not prepared to deny its possibility; yet I will say that just as certain seeds require a proper preparation and a certain condition of the soil to develop their fertility and reproduction, so if there is a bacterial causative factor in rheumatism, it requires an additional etiological essential in the shape of uric acid and its effects on the blood and tissues and the circulation, especially in the capillaries.

In conclusion, alkalies do not neutralize uric acid, but merely prevent its accumulation, to the extent which constitutes a *materies morbi*, by promoting its oxidation to the point of urea formation, when it can be disposed of by the emunctories, provided their functional activity is carefully and adequately maintained.

Admitting the influence of heredity, imperfect hygienic influences, environment, etc., we must have in addition, resulting

therefrom, or derived from other conditions, abnormal metabolism, developing an excess of, or a suboxidation of, the nitrogenous constituents of the economy with resultant uric acid and other products. The greater frequency of rheumatism, especially in the temperate latitudes than in the arctic or tropical regions, is a further argument that I regard as of no little value. In the temperate latitudes nitrogenous food is partaken of only too liberally; and while in the arctic regions it is almost the sole diet, yet it is demanded as a heat producer, and an excess is necessarily consumed; while in the tropics, dame nature alone regulates the character of the food supply by the profusion of fruits and vegetables and the scanty development of more highly nitrogenous aliment.

#### TREATMENT: GENERAL.

In all these conditions there are certain points of treatment that I regard as essential:—

1. *Hygienic*.—In this is included careful attention to general surroundings, an abundance of fresh air, plenty of sunlight when available, and when possible as much exercise as possible in the open air preferably, short of fatigue, walking, riding on horseback or in carriage, and lastly of greatest importance, free cutaneous action by means of frequent baths, warm or hot.

2. *Dietetic*.—Here imperative rules are essential to success. A dietary as free as possible from highly nitrogenous compounds, this excluding fresh butchers' meats, as beef, mutton, veal, pork, game, the dark meat of fowls, together with dried peas and beans. This leaves, however, a sufficiently large variety to supply all the wants of the economy. A strictly vegetarian diet is not incompatible with a fair state of health and strength. Bread made of flour, buckwheat, corn, and barley, together with potatoes (both varieties), cabbage (preferably raw), radishes, cress, spinach, turnips, and turnip tops, lettuce, celery, string beans and fresh peas, these two being quite young and tender, and all the different varieties of fruits, especially the acescent, including berries in season and particularly the strawberry. Tea should be excluded; one cup of coffee each morning is admissible. Cocoa and chocolate are unobjectionable, and if alcohol is demanded a limited

amount of good whisky may be permitted in some cases. Sugar should be used in moderation. Milk, either skimmed or fresh from the cow, with butter-milk and butter, are admissible, while eggs and cheese, especially the latter, should be excluded; the former I occasionally permit, especially if boiled hard, or the white only used to be made into an omelet. Rice, corn meal mush, pearl barley, cracked wheat, and occasionally oatmeal or rolled oats, may be used, the latter being rather too high in nitrogen to be used regularly. As for meats, I do not object to breakfast bacon or boiled fat bacon, occasionally fresh fish in limited quantity, and the white meat of chicken or turkey, and with convalescence occasionally, but never oftener than once a day, a small amount of any of the proscribed meats.

3. *Medicinal.*—Of paramount importance is the use of such remedies as will the more rapidly and readily get rid of the uric acid, among which, since the days of Sir Alfred Garrod, the alkalies stand at the head, and of these I have always obtained the best results from a combination containing lithium. The following statements of Dr. S. O. L.-Potter in his hand-book of "Materia Medica and Therapeutics," I regard as sufficiently authoritative. "The high saturating power of this metal (lithium) makes its salts more alkaline than those of potassium, sodium, or calcium, hence more efficient in alkalizing the urine. . . . Lithium carbonate and citrate are extensively used in gout and the lithemic diathesis for the purpose of holding the uric acid in solution as lithium urate and preventing its deposit in the tissues, as sodium urate is less soluble." He further states that these two salts of lithium are "antacid and strongly diuretic."

For a number of years we have been using a combination prepared by Messrs. Keasbey and Mattison, of Ambler, Pa., to which they have given the name of "*Alkalithia*," a granular effervescent salt composed of caffeine, 1 gr.; sodium and potassium bicarb., each 10 grs.; and lithium carb., 5 grs. to each heaping teaspoonful: one or more teaspoonfuls to be taken in a glass of water, during effervescence, three or four times a day or oftener. This is not only more palatable than any other combination that I have been able to get, either ready prepared or dispensed, but I have found

it uniform in its composition and markedly reliable in producing results.

Now, while I cannot regard it as a specific, as is quinine in malaria, yet as in the various forms of malarial poisoning of such varying clinical manifestations as we find in periodical hemicrania, periodical neuralgia, intermittent and remittent fever of mild or severe type, including the malignant or algid form, I use the one reliable remedy; so also in the manifold and varying types of uricacidemia or lithemia, I have been using this particular preparation with only increasing degrees of confidence and satisfaction.

Eliminants are also very essential, and I often resort to some form of mercurial — calomel, 1 gr. per day, given in 1-4 gr. doses with soda, in the afternoon, for two or three consecutive days, sometimes substituting a 5 or 10 gr. blue pill. In addition to the mercurial, at the beginning, or at subsequent periods, I use additional alvine eliminants along the line of the salines, such as the phosphate or sulphate of soda. Another combination I have also found most excellent, is the "Granular Effervescent Phosphate and Benzoate of Soda," made by Messrs. Keasbey and Mattison; this being composed of 10 grs. of benzoate of soda and the equivalent of 50 grs. of crystal phosphate of soda in each heaping teaspoonful. In the long-continued use of remedies to keep down the varying excess of uric acid, these effervescing preparations are most admirable.

#### SPECIAL TREATMENT.

*Asthma.*— In order to relieve the distress of the attack, coming on as it so often does one, two, or four hours after midnight, the reason for this so logically brought out by Dr. Haig, I generally resort to some of the established combinations of drugs or special ones, among which I have found the fumes of burning nitrate of potash paper, or a combination of stramonium, belladonna, and hyoscyamus leaves made into a pastile, a cigarette of stramonium and tobacco, a dose of antipyrin, chloral, an amyl nitrite pearl broken and inhaled, elixir of paraldehyde in a half-ounce dose, an arsenical cigarette, some suiting one person better than others. A very good combination to have on hand is the following formula of the late Dr. Wm. Pepper, of Philadelphia:—

**R** Ammonii bromidi..... gr. clx  
 Ammonii chloridi..... gr. xc  
 Tr. lobeliæ ..... m. clxxx  
 Spts. etheris comp..... fl. ounce, j  
 Mist. acaciæ..... q. s., ad fl. ounces, vi

**Ms.**

**Sig.:** A dessertspoonful every hour or two during the spasm.

To this I have sometimes added 2 to 2 1-2 drams of chloral hydrate.

I at once place the patient on a rigid anti-lithemic dietary, give directions along the lines laid down under general treatment as to hygiene and dietary, and resort to the Alkalithia and look well after elimination, in which I find the combination of phosphate and benzoate of soda most excellent. When using these two preparations I usually give the Alkalithia one and a half hours or two hours before eating and at bedtime, and the other half an hour before breakfast, or before each meal as may be needed.

*Eczema.*—The general and special measures of treatment above stated, may need some modification, as cod liver oil in debilitated cases, as well as iron and manganese in anemic conditions; but I place great importance on the use of the Alkalithia, even in cases of “crusta lactea” in the nursing infant I administer the Alkalithia to the mother in full doses, looking after her general condition as to elimination and diet. Locally I use soothing and emmollient preparations to the child. However, in all cases of eczema antilithemic treatment must be kept well to the front, and locally such remedies may be used as will best suit the particular case; in moist and weeping cases, oxide, carbonate or sulphate of zinc, with boric acid as a dusting powder; or carbolic acid in small quantity can be added to the zinc. Salol has given me good results as a dusting powder. In dry and scaly eruptions, I use emmollient unguents and washes, glycerite of tannin, the sulphate of alum, glycerine, and rose water; carron oil is a good preparation in acute cases. Ointments of zinc carb. or oxide, with oil of cade and cajeput; organic, the subnitrate and subcarbonate, as well as the subgallate of bismuth are excellent as dusting powders in the moist cases, and as oleates or simple ointment com-



binations in the others. The various local remedies are numerous, but unless accompanied by antilithemic measures internally, all or any will be disappointing.

*Headache* cases require for immediate relief only the analgesic effect of some one of the coal tar derivatives, the bromides with or without chloral; but although we can in almost all cases give immediate relief with morphia or cocaine, they should *never* be used, and if we cannot secure prompt temporary relief by the first-mentioned remedies we had far better wait until Alkalithia and eliminants have got in their work. Rest in a darkened room is far preferable to such dangerous agencies as opium in any form and cocaine. Cold or hot applications to the head — the latter preferably, as well as counter-irritants, such as sinapisms, ammonia, or chloroform applied on a cloth or bibulous paper and prevented from evaporation, etc., will aid in securing relief. In cases accompanied with nausea, I have found the effervescent Alkalithia and the Phosphate and Benzoate of Soda most excellent. Lithemic headaches should be prevented rather than cured temporarily, and this can be accomplished by means of the general measures of treatment I have suggested.

*Rheumatism and Gout.*— Here again, I cannot commend too highly the use of these two excellent preparations, in connection with dietary and hygienic measures; in no disease is the question of diet so important as in the latter. I shall not take up much more space in suggesting local measures in these two conditions, limiting myself to a reiteration of the value of Alkalithia as well as the granular salt of Phosphate and Benzoate of Soda in these conditions; which I have also found of great service in lithemic neuralgia, and mental conditions due to uric acid.

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## THE FACTORS WHICH INFLUENCE THE PERMANENCE OF CURE IN OPERATIONS FOR CANCER OF THE BREAST.\*

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BY WILLIAM D. HAGGARD, M. D., NASHVILLE, TENN.

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CANCER of the breast is the commonest form of malignant disease met in practice. It still remains the scourge of woman-kind and unlike its twin devastator, tuberculosis, it can be early recognized and can by radical surgery be absolutely stamped out like a fire. It is not an inaccessible disease. It commits its ravages by daylight. It challenges the attacks of the surgeon and has mocked his tardy efforts from the house-tops for ages. The disease has had lavished upon it a stupendous amount of technical skill in the unraveling of its pathology and has had brought to bear upon it the greatest thought of the surgical world. The one thing needful at the present time is a keener appreciation on the part of the profession of the necessity for early recognition and this in turn depends upon the realization and conviction that ninety per cent. of all lumps in the breasts of women past thirty are or will become cancer. Thirteen out of fourteen tumors in the breasts of women beyond forty years are malignant. Unfortunately cancer is on the increase. It is getting to be more common in the young and in races formerly immune. There are four times as many deaths from cancer in England as occurred fifty years ago. Leaf considers that the four antecedents that predispose to cancer of the breast are: (1) Errors of lactation. (2) Family history of tumors of the breast. (3) Injury. (History of trauma in over one-third.) (4) Worry and anxiety. It is perhaps a combination of all these causes, with or without mastitis, that give such a large number of tumors of malignant tendency in this gland. The male breast is affected with cancer once to every 177 cases in woman and sixty per cent. of the male cases are traumatic. In women only six per cent. involve both breasts. I have, however, removed the sister breast ten years after the first amputation.

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\* Read at meeting of Tenn. State Med. Ass'n., April, 1907.

While we do not know the cause of cancer, and may never know until the cause of cell growth and life itself is made manifest, we now know its mode of extension by the lymphatics and this offers the key to the operative treatment. We must not only remove the visible disease but the glands and adjacent tissues which harbor the lurking and invisible cancer cells. Improvement in results depend upon early diagnosis. Cancer, itself, is at first entirely local and quite curable. It only becomes incurable when its unfortunate victim harbors the disease and conceals it like the Spartan youth who hugged the stolen wolf to his breast without a murmur though it gnawed at his vitals. Delay is the factor which really renders the disease incurable. It is in the promptitude of detection that deliverance lies and the chance of cure diminishes with every day of delay. In every single woman who dies from cancer of the breast there was a time in its beginnings when it was absolutely curable.

Technical improvements seem to have reached their limit. In the pre-antiseptic period Billroth only removed the tumor itself and left the gland. This yielded only seven and four tenths per cent. of permanent cures. These early experiences have begotten a deep-rooted belief in the mind of the laity and even of some members of our profession that cancer is well nigh a hopeless malady. Moore and Mitchell, of Liverpool, developed the removal of the axillary lymph nodes in 1867-77 respectively. Volkmann and Kuster next added the removal of the fascia from the pectoral muscles in 1882-1883. Then Gross and Heidenhain in 1889 advised and practiced the removal of the pectoral muscles themselves. Finally Halstead in 1894 adopted all of these practices and took the final steps in the perfection of our present day technique in practicing the wider extirpation of the skin and taught us the wisdom of extensive operations. In spite of these improvements, however, Pilcher laments the fact that upon the whole "one is almost driven to the conclusion that a surgeon never sees cancer of the breast in any other form except the advanced stages." This cannot be said of a general practitioner because to him many of these patients first make their complaint. The most important factor, therefore, in the permanence of cure

in this dreaded affliction is the length of time which the tumor has been in existence. This may be divided into three periods: (1) The time which elapses before the patient discovers the tumor. (2) The time elapsing after the discovery of the tumor before the first consultation is had. (3) The time elapsing after the physician has seen the tumor. The first period is of unknown duration. Then comes the known period of its existence after she discovers it in which she delays seeing the physician. And, then again there is the known period in which the doctor delays advising the removal of the tumor. The cases, therefore, that show marked evidence of delay, one half are due to the ignorance of the patient and the other half, I regretfully record, are through the counsel of the physician who examines the patient at the period when there is a tumor and perhaps without glandular involvement and advises delay. It should be our first duty to utilize all opportunities to instruct our clientele that a large per cent. of all cancers can be cured by operation in the beginning and by no other way. It is a fatal mistake to keep a woman under observation for months, with salves and applications until the real situation is forced upon us. The golden opportunity for early and complete removal is passed and the prospect for cure even with the most skilled surgery is very slight. It would be ridiculously stupid if it were not pathetically tragic when we are guilty of waiting for the very complications to confirm our suspicions, which when they do occur make us realize that the case is hopeless.

Exploratory abdominal section has had a wide field of employment. It is much more necessary to make an exploratory incision into a suspicious breast than into the abdomen and it should be resorted to in all cases. If we could wage as vigorous a crusade against cancer as has been successfully waged against appendix infections, it would be a most holy warfare and add many precious years to the span of human life.

As long as eighty or ninety per cent. of lumps in the breast are or will become malignant they are much more serious than any intra-abdominal complaint and should be examined with the same zeal that has characterized our efforts in unraveling the pathology

and cause of disability in the abdomen. As Rodman says, it is more important to make an early diagnosis in cancer of the breast than it is in appendicitis. Some of these cases may and do get well without operation, whereas neglected operations in breast cancer leads inevitably to the most loathsome and horrible of deaths. Women with lumps in their breasts do not understand their danger. They are afraid of operation on account of ignorance of its safety and the great probability of permanent cure in the early stages because of an unfavorable result in some friend who was probably operated upon in an advanced stage. But worse, she may be illy advised by the ultra conservative physician or surgeon, who, although honest, is not keenly alive to the burning fact that the mammary lumps are, or nearly always, malignant or will become so if left alone and gives the fatal advice to "come back in the fall" or "not to bother it until it bothers you." How can we ignore the advice of that ripe surgeon Maurice Richardson, who tells us that "all neoplasms wherever situated should be removed if possible as soon as discovered." Rodman says "he who advises a woman with tumor of the breast to wait is guilty of an unwarranted and censurable act" and yet there is nothing more simple than the microscopic examination of a lump in the breast. The tumor if small and undetermined can be easily removed through a slight incision and a portion of a large growth can be removed and sent to a pathologist for examination. The resulting wound can be left open with two or three provisional sutures and packed with gauze saturated in Harrington's solution or with alcohol to prevent any of the cancer cells from wandering into the blood vessels and setting up metastasis. A better plan and the one which I am following at the present time in all suspicious tumors is to have a freezing micotrome and a pathologist in attendance upon these operations. A small bit is removed frozen, sectioned, instantly examined and a report is returned in from three to ten minutes. If malignant a radical operation can be proceeded with at once and if not the tumor can be removed with ease and the operation concluded with rapidity to the relief of the patient and the satisfaction of the surgeon. I do not know of a more happy conclusion than to

find that a suspected tumor turns out to be innocent. I regret to say that this is the exception and not the rule in cases where clinical evidence points to malignancy. I should, therefore, most earnestly urge that when in doubt that the tumor should be removed with its capsule or adjoining tissue whenever a lump is discovered in the female breast. No matter if it is no larger than a hazel-nut. If all tumors of that size were so treated and the radical operations performed in the malignant ones the permanence of cure would be above ninety per cent. I believe this would save more lives than any prophylactic measure that is practiced at the present time. Fortunately when these cases first present themselves we have a nodule that cannot be moved about in the gland, there is a retraction of the nipple from infiltration of the sub-arœal lymphatic vessels that points so unerringly to scirrhus, and there is little doubt about the diagnosis, especially when there is involvement of the lymph glands in the axilla. Retraction of the nipple and elevation above the horizontal line through the nipple of the opposite breast is pathognomonic of scirrhus: Adeno-carcinoma does not produce this elevation of one nipple above its twin. All of the diagnostic signs of cancer that we learned as students are really its complications. We must relearn the importance of suspecting and microscopically proving the diagnosis in tumors of the breast no larger than peas. We should shout aloud in a chorus that, like the first shot at Lexington, would "ring around the world," that all cancers of the breast in their beginning are as surely curable by adequate operation as that the snows will melt under the noon-day sun.

External cancer does not kill locally but always through metastasis and almost universally by the lymph streams. It, therefore, may be stated as a surgical axiom that has been proven up to the hilt that cancer is entirely a curable disease when situated in an organ or tissue which of itself is removable without causing death, provided it has not extended beyond its immediate or primary lymph efferents, which are also completely removable. It is now generally recognized that in young subjects cancer is particularly pitiless on account of the active and succulent lymphatic dissemination. This is very much more rapid in the young,

just as all other infections are. The younger the patient, therefore, the worse the prognosis. In elderly persons where there is a general atrophy of the lymph system and changes in all the vessels, dissemination is more slow, cancer will remain local a longer period of time. The older the patient the better the prognosis.

In the breast there are six routes of lymphatic distribution. The first and more common is in the axillary region. Second, in the neck, extension occurring over the clavicle and also under it. Third, the anterior thoracic glands through the lymphatics that return with the intercostal vessels. Fourth, the posterior thoracic glands involved by the lymphatics of the internal intercostal muscle. This extension is almost inevitable when the gland is fixed to the chest wall. Fifth, across to the sister breast. Sixth, down the epigastric fascia into the abdomen.

Sampson Handley, of London, in the Hunterian Lectures for 1905, claims that the lymphatics are the routes of extension of this dreaded disease rather than the blood as formerly taught. He found that in twelve per cent. of autopsies the abdominal cavity was the seat of metastatic deposits while the thorax was free. This is explainable on the ground that this takes place by way of the minute lymphatics that travel under the deep fascia to the epigastric fascia which leads to the peritoneum and allows the cancer cells to be showered into the abdominal cavity. He advises the removal of this fascia in addition to the Halstead operation.

While speaking and urging the importance of early diagnosis we must recognize our utter hopelessness in the face of delay and advanced disease. While even in delayed cases operation nearly always prolongs life, if we would decline those late and unfavorable cases more good would accrue to the community than by performing partial operations which must of necessity be disappointing. It is this fact which has made the laity so prone to avoid operation. If we would plainly tell these late patients that operation is hopeless their neighbors and relatives, profiting by that sad experience, would seek relief earlier, whereas, in our well intended but futile efforts in the bad cases the necessarily melancholy results discourage those who otherwise would be operated upon in a curable period.

The contraindications to operation may be enumerated as:

1. Fixation to the chest wall.
2. Extensive axillary involvement where all the structures are fused.
3. Enlargement of the supra-clavicular glands which are secondary groups.
4. The pig-skin edematous lymphatics over the breasts, signifying that all the routes of lymph return are blocked.
5. Multiple shot-like nodes in the skin, commonly seen after osteopathy, which bruises the vessels and spreads the cells over the chest, with the formation of infected nodes.
6. Suppuration of the cancer itself. The only operative fatality in my series occurred in a case of this character.
7. Cachexia, the sad death mask of constitutional dyscrasia.

Some years ago we had sanguine hopes of the efficacy of the wonderful X-ray. It has proven almost totally disappointing in the management of malignant disease. While it cannot cure cancer, except the most superficial forms of epithelioma, it will produce a higher type of local resistance. It will contract the lymphatics and deposit fibrous tissue in and about the glands, which delays progress. It is on the same principle that Dawbarn ligates the arterial supply to starve and thus delay malignancy. The X-ray should be employed after operation, especially in the advanced cases. With this agent I now have a series of cases living without recurrence after five years. I am quite sure my per cent. of cures have been augmented by this agent, although to be sure, as one's experience increases the selection of cases and the technical perfection of the operation must not be denied its quota of usefulness.

Early operation upon cases discovered in middle and advanced life are favorable. At operation if the glands are discovered only in the outer axillary region the case is still favorable. The nearer the growth approaches the clavicle the more unfavorable becomes the prognosis. If the glands have extended under the clavicle the prognosis is extremely unfavorable. Rodman believes, however, that operation in the first year should yield a permanent cure in seventy-five per cent.

Halstead has reported fifty per cent. of permanent cures, and Cheyne in his private practice reported 17 out of 34 cases who were living and free from recurrence from 6 to 17 years after-



ward. Childe quotes a report of 46 cases with 17, or 42.5%, who remained well from 5 to 20 years. Formerly we fixed an arbitrary limit of cure at 3 years. Gross after an extensive investigation found that only 2.3% recurred after three years. We then increased it to five years, and now the surgeons say that ten or more years are demanded in which there is freedom of recurrence before a cure can be said to be permanent. Practically, however, at the cancer age most patients who can be given a ten year immunity will die of the so-called natural causes before the disease returns.

As knowledge becomes more general as to what has been and can be done by surgery for the cure of this malady less hesitancy will be displayed by its victims and they will avail themselves of the only help that can be offered. The local disease can be removed with cure if there is no metastasis, but a single remote metastasis will discount the beneficence of the most skilled surgery. The surgery of the past in cancer of the breast was incomplete operation for advanced disease; of the present, complete operation for advanced but still operable cases. The surgery of the future is complete operation in early and therefore curable cases.

*Technique.* Without going into the detailed description of the operation the essential steps may be summarized as follows: The most convenient position for the patient's arm is to be tied upright to a Edebohls stirrup. This gets the hand out of the way and dispenses with one assistant and puts it in an easy position for dissection of the axilla.

A modification of the Jackson incision gives the best access to the axilla and allows the maximum of the skin covering available to be utilized. The incision should be shelving to undermine the flaps and not leave any nodules of the gland encircling the tumors; at least two inches should be allowed from the margin of the growth.

Kocher's idea of doing the axilla first has many advantages. It is the most important and difficult part of the work and should be done while the surgeon is fresh. It secures all the blood vessels in the beginning. Whereas, if the operation is planned

from the center towards the axilla one will of necessity cut the same vessels over and over again. The mammary gland should be the last thing to be removed and it will thus serve the useful purpose of keeping the breast covered and avoid chilling the chest during the tedious dissection of the axilla. In severing the greater pectoral muscle the clavicular portion may be saved because it covers the vessel's line and has a separate nerve supply and does not interfere with the removal of the gland bearing fascia which is the essential feature of the operation.

The pectoralis minor muscle should be removed with the tumor mass and the fascia harboring its glands. It will thus be seen that from the apex of the axilla to the last remnant of the chest attachment the mass should be removed in one unbroken piece. The neck should not be gone into as a routine unless the growth is in the axilla which has almost been the *bête noire* of the surgeon.

I cannot lay too much emphasis upon the ease of the dry dissection by gauze mops covering the index finger aided by occasional snipping and spreading of the tissue with the probe-pointed Mayo dissecting scissors.

In addition to the axillary drainage which is made through a separate puncture and conducted by the split rubber drainage tube containing gauze an additional puncture should be made over the angle of the ribs for another cigarette wick drain as it is otherwise impossible to drain this area adequately.

In conclusion I should like to call attention to the approximation and tension sutures employed by the Mayos, which consists in taking a wide bit of one flap allowing the needle to perforate only the edge of the opposite flap and of the corresponding margin and then widely on the opposite flap in a figure of eight shape and tied over all. This makes a double suture which approximates the margin of the incision accurately, and also acts as a tension suture.

The mortality of 21 surgeons in 600 cases is nine-tenths of one per cent. It will thus be seen that this operation has less mortality than perhaps any operation of equal extent that has made surgery so beneficent to the human race.

RENAL TUBERCULOSIS: NEPHRECTOMY; RECOVERY; SUBSEQUENT CALCULOUS ANURIA; NEPHROTOMY; DEATH.\*

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BY RICHARD DOUGLAS, M. D., OF NASHVILLE.

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**I**N offering a contribution to this body, I am impressed that it is **the** useful rather than the novel or clever that will appeal to you. My object is to impress upon you the importance of **collective** evidence in diagnosis. If I should be asked to give the **most** essential point in diagnosis, I should emphasize the value of **a** correct history.

**T**he recognition of renal tuberculosis depends upon a few **accepted** facts, and I trust that I may be pardoned for emphasizing **these** diagnostic points. The patient in seventy-five per cent. of **cases** is a woman between the ages of twenty and forty. Careful **investigation** will reveal the history of some rather protracted and **unexplained** illness, a decline in health for some months. Not **infrequently** the onset is more acute and the febrile state is **mistaken** for some of the essential fevers, as in two of my patients.

**T**he next early phenomenon to attract the patient's attention is **polyuria**, occurring particularly at night. The voiding of large **quantities** of clear urine is quite suggestive; it simply indicates **the** stage of irritation which is followed later by congestion. If **the** urine is examined, microscopical quantities of blood will be **found**; but the characteristic of the hematuria in renal tuberculosis is **a** spontaneous occurrence of a quantity of free blood sufficient **to be** detected with the unaided eye. This bleeding is not induced **by** exercise or exertion; it merely marks the early stage of invasion of the kidney.

The patient now has some discomfort, usually expressed as a backache or a tired feeling. At this stage there is not necessarily marked loss of flesh or elevation of temperature; later, as the tubercular foci undergo caseation and abscess formation, septic symptoms appear; slight temperature, rarely over  $101^{\circ}$ ; night

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\* Read at meeting of Tenn. State Med. Ass'n., April, 1907.

sweats; digestive disorders. These are conspicuous; there is loss of flesh and color. The urine now becomes quite characteristic; it contains pus and blood. It may be acid or alkaline in reaction, and is often very offensive.

When the kidney is suppurating freely, it is not unusual to note great variations in the daily quantity of urine. Partial suppression is usually attended by marked constitutional symptoms of a septic character and is explained by the occlusion of the ureter with plugs of pus and mucus. When these are dislodged, there is a free discharge of the purulent urine; the backache is relieved and general symptoms appear better.

In these stages of retention, the kidney is markedly tender; and, if palpable, some increase in bulk may be noticed. These phenomena merely indicate suppuration in some part of the urinary tract; other means must be employed before we can reach a specific diagnosis as to the exact seat and character of infection. Cystoscopic examination in the early stage of the disease will show the bladder healthy. Later the expert may detect the tubercular ulcers in the bladder or the alterations about the mouth of the ureter of the diseased side which many consider as pathognomonic. The picture seen is that the mucous membrane around the meatus is pouting, granular, and red; the ureteral orifice is usually patulous, standing open and in some instances purulent urine may be seen escaping from it.

As a rule, we demonstrate with the cystoscope the healthy condition of the bladder rather than disease of the kidney, thus showing that the pus in the urine is not due to the cystitis. To determine the true origin of pus in the urine, one of two processes must be employed: some form of segragator, either Harris's or Louy's or else the collection of the separate urines through the ureteral catheter. The latter method is decidedly more accurate; but is not always an available means of diagnosis.

Finding the urine from one catheter purulent and that from the other healthy, we have advanced in our diagnosis to localizing the disease in one of the kidneys. We know we have a suppurative condition; but the true nature is yet unknown. There are three tests we may now employ that determine the tubercu-

lous nature of the infection; the first, that of finding the tubercular bacilli in the urine of the diseased side. This I was able to do in the majority of my cases. Repeated examinations may prove negative. The only point of error is relying upon non-catheterized urine and mistaking the smegma bacilli for the tubercular bacilli.

Bacilli may not be found in the pus and yet be the cause of the suppurating focus. In such instances the tubercular nature of the process can be established in one of the two other ways: either by using tuberculin inoculation, when, if the process is tubercular in nature, you will get a distinct constitutional and local reaction; a temperature of one or two degrees with marked local pain and tenderness will follow within six or twelve hours after the inoculation.

If *still* uncertain, or the tuberculin is not available, we can take the centrifugalized urine from the diseased side and inoculate Guinea pigs. Several pigs should be used and the inoculation should be both subcutaneously and intraperitoneally. In from three to six weeks the pigs will die of tuberculosis, if the germs are in the urine. These steps are, if carefully carried out, sufficient to make the diagnosis conclusive; and at this juncture I wish to report the case of Mrs. G. L., that you may see how closely the clinical phenomena in her case followed the teaching upon the subject:—

In the summer of 1904 Mrs. G. L. had an attack of fever which lasted about three weeks. She was attended by Dr. William Bailey of this city, and myself. We regarded the fever as an atypical typhoid. Her convalescence was slow but presumably complete. The patient continued in only moderate health for the next year and was annoyed by frequent and copious urination. During November and December of 1905, she was treated by Dr. Owen Wilson for cystitis. January 6, 1906, she came under my care.

The first specimen of urine examined contained blood and pus. I now carefully reviewed the history of the case and ascertained the facts above stated. Cystoscopic examination showed the bladder absolutely healthy; I could see no difference in the ori-

fices of the two ureters. The patient had frequent attacks of pain in her back, nausea, and vomiting. She passed from sixty to ninety ounces of urine a day. It was generally clear, only occasionally did it appear smoky or turbid with pus.

After some difficulty I catheterized the ureters. The separate urines were examined by Dr. Litterer. He reported that he had found tubercle bacilli in abundance in the urine from the left kidney. Six guinea pigs were inoculated with this urine from the left kidney. Three or four of these pigs died within six weeks of tuberculosis. One of the six probably died from septicemia from an extensive cellular suppuration.

Wishing to employ every means of diagnosis, one inoculation of tuberculin was used. The patient had temperature of  $103^{\circ}$  and suffered acutely for forty-eight hours with pain in the back and limbs and general aching; indeed, she was so sick from this inoculation that I did not attempt it the second time. Furthermore, it seemed that I had all evidence possible. Cystoscopy showed the bladder healthy; ureteral catheterization and segregation both collected purulent urine from the left kidney; the tubercle bacilli were found in that urine by Dr. Litterer; Guinea pigs were successfully inoculated by him; prompt reaction followed the tuberculin test. I therefore made a positive diagnosis of tuberculosis of the left kidney, holding that the bladder and right kidney were sound.

The patient was in a very low state of health; she weighed only eighty-seven pounds and had the most pronounced anorexia. It was with difficulty that I could induce her to take any nourishment; and while I could not demonstrate any active focus in any other part of the body, I did not think that she was a suitable subject for surgical interference; and then, too, just at this time I was impressed with the modern treatment of tuberculosis, namely, rest out of doors and forced feeding, so this patient was placed on a cot on an upstairs porch with southern and western exposure, where she remained day and night, only coming into her room for toilet purposes. She was fed on raw eggs, milk, rare beef, and a little claret wine. She was religiously fed every three hours, between the hours of 5 A. M. and 9 P. M.

There was manifest improvement in her general condition, interrupted by occasional attacks of pain in her back, fever and sweats, with digestive disturbances. These phenomena were always preceded by marked diminution in the secretion of the urine, and would subside with a free flow of purulent urine.

A cystoscopic examination was made at least once a month to determine the condition of the bladder. The hygienic treatment of the case appealed so favorably to the family and the patient that I was willing to follow it for a while, warning them, however, of the danger of infection of the bladder with probably ascending infection through the ureter to the other kidney. After eleven months of this treatment, the patient had good color and had gained forty pounds in weight. Had it not been for the presence of pus in the urine one might have supposed her to be in perfect health.

Christmas day, 1906, she had a sharp rise of temperature, and severe pain in the back. This attack was more pronounced than any previous one, so I urged immediate operation. This was not agreed to until all the facts were submitted to Dr. Howard Kelly. He urged immediate nephrectomy.

Jan. 16, 1907, patient was admitted to the infirmary, and as a final test to ascertain the condition of the kidneys, Dr. Bromberg catheterized the ureters and obtained from the right a free flow of urine that was absolutely normal, while from the left the urine contained such an admixture of pus that it was discharged very slowly through the catheter. The function of the right kidney seemed perfect and I trusted to the quantity, microscopic and chemical tests to satisfy me upon this point. A more scientific course would have been to employ cryoscopy, through which means we can determine the efficiency of the kidney.

On January 17, with the patient anesthetized by Dr. Marr, with the assistance of Dr. Tigert, lumbar nephrectomy was done and this kidney, the left, with the ureter to the brim of the pelvis, removed. Its cortical substance is apparently destroyed by multiple foci of suppuration. In one of the cavities is lodged a stone, a phosphatic concretion. The patient had but little shock from the operation, was put to bed in good condition, and se-

creted nineteen ounces of urine during the first twenty-four hours and continued to secrete an abundance of urine.

Her convalescence was absolutely afebrile until the twenty-fourth day. Then there was a little infection that appeared to come from the lower drain, the seat of the stump of the ureter. This caused a little temperature. After this the wound healed and the patient appointed a day for leaving the infirmary. February 24 the patient had severe pain in her right lumbar and inguinal region radiating down to the genitals. This continued for four or five hours, when it was relieved by a small dose of morphine. Later the patient passed a calculus the size of a small pea. I now thought the trouble all over. The second day following she had an abundant flow of urine, but that evening late she had a return of the colic on the sound side. I now discovered that there was suppression of urine. With the history of the calculus passing the day before and knowing that we had but one kidney, the suppression of urine preceded by severe renal colic, the diagnosis of calculous anuria due to blocking of the right ureter with a stone, was made.

After the anuria had existed for twelve hours, the patient had a chill and very rapid rise of pulse. Drs. Witt and Witherspoon kindly saw her with me at this time, both agreeing in the diagnosis and urged that immediate nephrotomy be done upon the sound kidney. The question here arises whether it was the wiser course to search for the calculus in the ureter or do a nephrotomy. We know that a calculus is apt to lodge in the ureter at three points: first, two or three inches from the kidney; second, at the brim of the pelvis; and third, at the vesical end.

We believed that this calculus was somewhere in the pelvic portion of the ureter. Dr. Bromberg could pass the ureteral catheter in the ureteral orifice but could not push it into the duct more than two or three inches.

The patient's condition prohibited the use of the X-ray, and was not such as to permit prolonged operation; so we determined upon nephrotomy. This was done and the kidney stitched to the lumbar fascia and opened. In a few hours urine began to be discharged through the lumbar wound. We could not measure



the amount of urine, but it was abundant and saturated large pads.

The condition of the patient materially improved though the temperature remained  $101^{\circ}$ ; pulse fast. Saline infusion and other heart stimulants were employed. The patient continued in this condition for several days, and died March 2, 1907.

This was the calamitous ending of my eighth and last case of renal tuberculosis, death occurring forty-four days after nephrectomy, from calculous anuria.

My first case was Mrs. Dr. Dice, of Morristown, Tenn. In this case there was pronounced pulmonary lesion. There was a tubercular abscess on the right kidney. The condition of the patient was so extreme that nephrectomy was not attempted; but the kidney was cut open and the multiple foci of suppuration were incised and the kidney packed with iodoform gauze. Drainage was copious and there was some leakage of urine for three months; finally, however, the sinus closed and the patient made a complete recovery, dying seven years later of other complications.

Miss B. When this patient came under my care she had advanced renal and bladder tuberculosis. The microscopical diagnosis was made by Professor Coplin. I urged operation, which was declined. Later she was operated upon at Johns Hopkins Hospital and returned home to die within a year of general tuberculosis.

Another case was Miss Sanders, from Columbia, Tenn. This patient had a clear history of tuberculosis in which hematuria was the chief characteristic. She was subjected to nephrectomy and did nicely until the tenth day. Without warning, there suddenly developed acute dilatation of the stomach, from which she died in twenty-four hours.

Mrs. X., of Cadiz, Ky. This lady was a very thin, emaciated patient in a hectic condition; had a large kidney which was removed by nephrectomy. In this case the diagnosis of hydronephrosis was made, the true nature of the case not being suspected until after the kidney was removed, when it was recognized that it was tubercular. This patient made a happy recovery and was

restored to perfect health when last heard of two years after operation.

Mrs. Brinkley, the wife of a minister in East Nashville. This lady had been treated for malarial fever for several weeks and finally came under my care. Renal suppuration of a tubercular nature was recognized. Nephrotomy was done; she was supposed to be in no condition to undergo a nephrectomy. There was no disease of the bladder. She made a very slow recovery, drainage persisted for a long time; ultimately the sinus closed and she is living and well at this date.

Mrs. M. B. P. was referred to me by Drs. Thompson Anderson and E. G. Wood, of this city. There is something in this case worthy of note. This patient suffered with supposed cystitis. The urine was so horribly offensive that it greatly distressed the patient and rendered her room uninhabitable. This odor was due to mixed infection of colon bacillus. A careful study was made of this patient, but finally she was subjected to nephrectomy; made a quick and uneventful convalescence, and has since borne two healthy children. Her gestation and parturition were normal, though we have had great apprehensions concerning her.

While I am thus able to report two recoveries from nephrotomy, I think incision and drainage wholly inadequate treatment for a tuberculous kidney. There are two courses open to us in dealing with tuberculosis of the kidney: one is the hygienic treatment; that is the modern treatment for tuberculosis as carried out by Dr. Trudeau, of Sarinac Lake, N. Y. The other, the radical operation of nephrectomy, an operation done by me four times for renal tuberculosis, with three operative recoveries, with removal of as much of the ureter as is diseased. Surgeons generally deny that renal tuberculosis is cured by medical means. One has only to see a case of vesical tuberculosis, an inevitable complication of the primary renal trouble, to condemn any plan of treatment that subjects a patient to the danger of this complication. In the poor Alabama woman referred to in my report, the last year of her life was one of horrible suffering. It was rendered tolerable by establishing a vesico-vaginal fistula. She spent her last days in bed with a pus basin in which to catch the urine as it flowed through the ulcerous bladder.

In conclusion I will say that renal tuberculosis is not an uncommon condition; that by attention to the history and careful investigation of the urinary organs, one may make an early diagnosis; that the means of diagnosis are at the command of the general practitioner, as ureteral catheterization is not an essential though great aid to specific diagnosis; that eighty per cent. of the cases only one kidney is affected; that radical removal of the diseased kidney and ureter by lumbar nephrectomy should be undertaken at once, the condition of a patient permitting it; that nephrotomy or partial nephrectomy are dangerous and incomplete operations; that gain in flesh and color under the modern treatment of tuberculosis is not a guide as to the pathology going on in the kidney. Apparent robust health is not incompatible with renal tuberculosis.

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## *Records, Recollections and Reminiscences.*

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ANNUAL ADDRESS OF ERNEST S. LEWIS, M. D., PRESIDENT OF THE ASSOCIATION OF MEDICAL OFFICERS OF THE ARMY AND NAVY OF THE CONFEDERACY.

*Delivered at Richmond, Va., Friday, May 31, 1907.*

*Comrades, Ladies and Gentlemen:—*

"ON to Richmond" has been the cry since our last reunion. Many years have sped since that cry was first raised, and since the stirring scenes and thrilling events of a war in which we bore part, disturbed the peaceful calm of nature. In treading Virginia soil memories of those unforgotten times never fail to obtrude and fill my thoughts. Coming to this historic city, a gem in the crown of the great state of Virginia, about which cluster so many epoch-marking events, glorious to her and to the nation, they are more vividly accentuated and revived; a state noted for the chivalry of her sons, and the charm and virtues of her daughters; the mother of presidents, and statesmen, and for long leader in the councils of the nation; a state which gave us Washington, the apostle of liberty, "first in war, first in peace, and first in the hearts of his countrymen," and Lee, heroic, great, good, the

Christian knight, without fear and without reproach ; and a legion of other great and noted characters, who live in history, and have place in the Hall of the Immortals.

But if Virginia shone in prosperity, it was when clouds lowered, homes were wrecked, hearts wrenched, and her soil desolated and crimsoned with the blood of the South, that the virtues of her people shone brightest, in their abundance of charity, whole-souled hospitality, and self-abnegation, to which hearts still bear witness ; and when the end came and gloom overshadowed the land like a funereal pall, set an example of resignation and submission to the Divine Will, with the dignity born of self-respect and honor preserved. Far be it from me to make invidious comparisons, or to deny the claims of other states who shared the burden and paid the penalty of failure, or to withhold from them their full measure of praise. Of each the same may be said. The war carried in its wake desolation, ruin, suffering ; and when the dogs of war were leashed, harpies flocked in hordes like vultures at a feast of death and preyed upon her vitals, until nature could stand no more and the voice of the South was raised in wail and agony to Heaven, and the cry went out as of Job, " O Lord, how long ? " Though all else was lost her self-respect and honor remained untarnished, and the virtues of her people never scintillated brighter, and though chastened and bowed in pride, she awakened, shook off her fetters, and like another Phoenix, rose from her ashes, not as a puling infant, but in full vigor of lusty manhood and filled with high hopes and aspirations. That Virginia should to me typify the South and illustrate conditions which then prevailed, is both fitting and just. She was the seat of government, the heart and soul of the Confederacy, and great and decisive events happened on her soil. She was the luminary around which were grouped her sister states, giving them light and borrowing strength ; and when her light grew dim, shadows rested on all, and when it was extinguished, the shades of night enshrouded and overshadowed all.

Short sighted that we are, the sport of circumstances, man proposes, forgetting that " there is a divinity which shapes his ends, rough hew them as he may." Standing here to-day after

forty years have fled, when life's fitful fever is near ended, we can well philosophize and exclaim, "The times change, and we change with them." Is there one here present whose heart is so dead to human impulses, that it fails to throb, or eye to kindle as the flag of our united country spreads its folds to the breeze, eloquent with America's achievements? The flag our ancestors followed in the march to freedom; and yet whilst yielding to none in our love and veneration for the glorious ensign of our country's greatness, there still remains a corner in the depths of the heart where is cherished as some precious memento of loved ones dead, the stars and bars hallowed by sacred memories, sad though they be, yet replete with the heroism and unfading glory of the South.

*Comrades*, I have strayed from the theme upon which I intended to speak: the Confederate Medical Officers. In composing my mind to this subject, other memories obtruded, and as "out of the fulness of the heart the mouth speaketh," so they held sway and influenced the trend of thoughts.

#### MEMORIES.

"They come like ghosts from the grass-shrouded graves,  
And they follow our footsteps on life's wending ways,  
And they murmur around us, as murmur the waves,  
That sigh on the shore of the dying of days.

There is not a heart that is not haunted so,

Though far we may stray from the scenes of the past,  
Its memories will follow wherever we go,

And the days that were first sway the days that are last."

Now, that busy fancy has ceased to conjure up phantoms, another disturbing element thrusts itself to question the propriety of this subject. Being closely identified with the medical corps would not a eulogium of their doings bring the personal equation too much in evidence, and warrant a suspicion of intent at self-laudation? Banish the thought! If Osler is right, I am already fossilized, fit to be chloroformed or knocked on the head; done with the vanities of this wicked world, and can therefore speak as one that was, with no misgivings that my motive will be impugned.

From my point of view, the medical profession stands on the

very highest plane, and its motto is duty. The training of a physician eminently fits him for army service, as it inculcates self-repression, self-abnegation, charity, and a fearlessness in the conflict with the deadly though unseen enemies of man; sacrificing his life if need be for humanity. Medical literature abounds with notable instances of such unselfish devotion and sacrifice to the cause. In the Confederate service, no class of men displayed greater patriotism and a higher degree of heroism than its medical officers, and in their ministration to the sick and wounded, as cheerfully and skillfully tendered the foe, thus practically illustrating the doctor's creed that affliction and suffering join all in one great brotherhood.

In the field he had no other incentive or inspiration to spur him on in his dangerous work save duty. Promotion was not open to him; acts of heroism passed unheralded and unrewarded. Neither were they performed in the delirious frenzy of battle, which emasculates fear, suspends consciousness, and arouses all the ferocious passions which bring oblivion to surroundings, actions, and consequences. No, he was upheld by a higher order of courage, and did his part in the midst of the infernal din and turmoil of contending armies with calm and judgment, and a fearless disregard of danger. What a well-organized medical corps empowered with unlimited authority can accomplish, was shown by the Japanese in the late war, in which was reversed all former statistics for two hundred years of four deaths from disease to one of bullets. This was no doubt due to the unlimited and untrammelled authority given the medical corps, and to the perfection of their system of hygiene and sanitation, from which the world has not ceased to wonder. When the burden of responsibility devolves upon our medical officers, and they are clothed with similar powers, our statistics may prove as encouraging, *but not till then.*

Comrades, we may never meet again, the sands of life run low, the fateful sisters stand even now ready to cut the thread which binds us here. When that supreme moment is at hand, and the spirit about to wing its flight to the great unknown, may

the peace which passeth understanding rest upon you, and may you enter upon that sleep which knows no waking, as he to whom the Master said, "Well done, thou good and faithful servant."

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## Selected Articles

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### GASTRO-INTESTINAL AILMENTS OF YOUNG CHILDREN.

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BY H. B. BROWN, M. D., WAUKEGAN, ILL.

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AS THE hot weather approaches the usual number of cases of gastro-intestinal ailments will confront us and if we be not alert the same mortality of old will occur among our little patients of one and two years. The keynote to success in the management of these cases is to see that correct feeding is enforced and to keep the alimentary canal as clean and nearly aseptic as is possible. If this be done much suffering can be obviated and many little lives saved.

Every medical man these days is capable of giving correct advice on infant feeding, the care of bottles, accessories, etc., if he will only take the time and trouble to make the mother understand how important it all is. The doctor's suggestions on this matter are too often regarded as simply platitudes and not thought of seriously until the child is in the throes of a severe illness. The following clinical reports are illustrative of my usual method of handling the more common but serious gastro-intestinal diseases we meet during the heated season.

Ethel G., aged ten months, suffering from cholera infantum; bottle fed. She was passing watery stools every few minutes. Temperature had been considerably elevated, but was now slightly abnormal. Mouth and tongue parched. Considerable emaciation and a scaphoid abdomen. Circulation weak and respirations labored. In fact an extreme prostrate condition.

Treatment: I put four ounces of Glyco-Thymoline with eight ounces of water and gave it as a high enema, causing it to be re-

tained as long as possible. This was repeated every hour or so until the bowels were thoroughly cleansed and the stools diminishing in number. I gave one tenth grain of calomel every two hours until the discharges showed the characteristic greenish. I also gave the following:—

℞ Elixir lactopeptine ..... ʒ ij  
 Glyco-Thymoline ..... ʒ ij  
 Oil peppermint ..... gtt. j

M. Sig.: Twenty drops every hour.

After eight hours the child was able to take nourishment and retain it. This consisted of cold pasteurized milk diluted with an equal portion of lime water. Child was given all the cold water and lemonade she wanted. She made a good recovery.—*Medical Summary, July, 1907.*

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## *Editorial.*

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### STATE SANATORIA FOR TUBERCULOSIS.

At the meeting of the Memphis and Shelby County Medical Society, held July 2, our esteemed and very able friend, Dr. G. B. Thornton of that city, read by request a most logical and practical paper advocating the establishment of a State Sanatorium for Tuberculosis, which was published in full in the *Memphis Medical Monthly* for August. He refers to the steps taken by Pennsylvania, North Carolina, Maryland, etc., along this line and says:—

“There is no good reason why Tennessee should not follow these examples, or be behind other states in providing suitable accommodations for those of its citizens who are afflicted with tuberculosis and are unable to provide properly for themselves, and thereby protect others from infection, with whom they necessarily are associated at their homes, or thrown in contact within their respective communities. That the disease is on the increase I think there is no doubt; whether this is due wholly to increase in population or to other causes, or both, is immaterial to this discussion. No available means should be omitted to restrict its spread and if possible eradicate it from every community in the state. The state provides insane asylums for the care of insane people and the comfort and protection of the communities and families where they occur. Tennessee has three such asylums, one in each grand division of the state. By law, each county has to provide hospitals for, or otherwise take care



of smallpox cases which are unable to take proper care of themselves, and protect others from infection." \* \* \*

"The necessity for the proper care of tuberculosis patients is twofold. One to provide for patients who are unable to take proper care of themselves while sick, and the other to protect the community from infection. This is a serious question considered alone as a public health measure, aside from its charitable or philanthropic aspect. A state sanatorium for consumptives who cannot provide proper care for themselves answers three important questions in this problem; it removes from his home community one cause of infection; it affords a refuge for the patient; and it becomes an educational institution for its inmates, who when cured, can return with impunity to their respective localities and instruct others as to proper ways of living, that is, in domestic and individual hygiene, which is all-important both in treatment and prevention. There are many private sanatoria in various parts of the country for the treatment exclusively of consumptives in every and all stages of the disease, but they are beyond the reach of the great mass of the people, who are the greatest sufferers and greatest menace to their families and to their communities.

"What is needed is a place for this class of people who cannot get proper care at their homes or a change of climate, which latter is so commonly and sometimes unwisely recommended by their advisers, for in some cases when such change is made it does more harm than good to the individual."

Dr. Richmond McKinney in a very excellent editorial in the same number of our valued contemporary, most heartily endorses Dr. Thornton's views, and from which we extract the following:—

"It is universally recognized that the sanatorium treatment of pulmonary tuberculosis has met with the best results so far of any known method of treatment, and the results in European countries where these sanatoria have been maintained for a number of years are flattering to a little-dreamed-of degree. And even here in the United States, where such institutions are of much more recent establishment, and where naturally the methods in many of the sanatoria are much cruder than in Germany, for instance, the statistical showing of cures and benefited cases of pulmonary tuberculosis is very encouraging. \* \* \*

"It has been shown very positively that pulmonary tuberculosis can be cured in any climate provided the facilities are afforded and the patient is properly directed in his search for a cure, and it matters not where the institution is located, whether it be in the Black Forest of Germany, the Adirondack region of New York, or one of the climatically and scenically less favored localities of some of our inland states, if the patient be treated with the same careful regard to plenty of fresh air, nourishing diet, and attention to general regimen, the diseased process can be stopped and the patient restored to physical activity."

After referring to the "value of every individual restored to health and work in the state," he concludes with this:—

"The state of Tennessee should certainly not be backward in arraying itself with the progressive states of the Union in establishing such a sanatorium, and we trust that the next general assembly of the state can be induced to make a generous appropriation for the establishment and maintenance of this much needed and laudable charity."

At the meeting of the State Medical Association in 1903 in this city, as secretary we arranged for a "symposium" on the subject of tuberculosis, which elicited ten valuable papers from members of the Association; and again in 1905, holding the same position, we arranged for another "symposium" on the same subject, and although valuable views were presented by Dr. J. A. Witherspoon, representing the medical profession; Rev. Collins Denny, the clergy; Capt. A. J. Harris, the business men; Mr. G. H. Baskette, the press, we were disappointed in the inability to be present of members of the state government, the bench, and the bar, who had accepted invitations to present the views from their standpoint. A few weeks prior to the meeting last year at Memphis, we suggested to Dr. Geo. H. Price, who had succeeded us in the secretary's office in the State Medical Association, that another "symposium" be arranged for that meeting, which resulted in addresses by Dr. B. G. Henning, Rt. Rev. T. F. Gailor, and Dr. Louis Leroy, and at the conclusion in a few extempore remarks, in which, after referring to the various state charitable institutions, we said that the most important measure of prophylaxis was the proper care of those suffering with the disease, and offered the following resolution, which was unanimously adopted:—

"*Resolved*, that a committee of twelve members of the Association be appointed by the president, three of whom shall be from the 6th congressional district, and one each from the nine other congressional districts, whose duty it shall be to memorialize the next session of the General Assembly to make suitable appropriation and enact suitable legislation in order to provide three state institutions for the care and treatment of indigent citizens of the state who are suffering from tuberculosis, and this committee shall appeal personally to the members of the General Assembly in their districts in behalf of the measure, and that each member of the Association shall also help, aid, and assist in this matter by personal interview and appeal to his respective representative in the House and Senate." (See page 22, "Transactions" of 1906.)

However, we regret to say that no committee was appointed, and we could not but feel that but little interest was manifested in regard to so important a subject. But now, as our Memphis friends have taken up the matter, we desire to assure them of our most hearty and earnest support, and will try and see to it, that at the next meeting of the State Medical Association, it shall have such consideration as its magnitude and great importance demands.

Fully recognizing the liberal state aid to our public schools, the institutions for the blind, and the deaf and dumb, as well as the more important hospitals for the insane, here is as important a field for state aid as any of them. Three magnificent establishments for the insane, one in each of the respective grand divisions of the state, with liberal appropriation for their maintenance are amply justified; first, for the reason that by state aid only can these unfortunates be given that care and attention that has proven most suitable for their comfort and restoration to a normal condition; second, for the protection of the property, comfort, and lives of the other citizens.

Those bereft of reason are no more dangerous to their relatives, friends, and neighbors and other citizens than are those suffering from tuberculosis. The value of state aid in preventing the ravages of cholera, yellow fever and smallpox is but a "drop in the bucket" as compared with the "Great White Plague." It is only by the developments of quite recent years that we have come to a knowledge that it is both preventable and curable. Shall we longer neglect the teachings that contain so much of so great importance to us, our families, and those unfortunates who have become infected with the tubercle bacillus? It is a duty we owe to ourselves, our families, and the "stranger within our gates," as well as to the sufferers. It can only prove as wise and profitable an expenditure as any appropriation heretofore made by our legislature.

Here is a disease and a condition of too great and overwhelming a character for individual or home management. Nor will municipal or county efforts be adequate, although in some of the more populous counties and municipalities the aid given by the state may be largely supplemented; but far more good can be accomplished by invoking and relying on the aid of the state.

Our suggestion is to work for an appropriation sufficient to establish a well-equipped and properly-constructed sanatorium in each grand division of the state, with a Board of Trustees for each carefully selected, just as are the trustees of the three hospitals for the insane; the provision being made for a proportionate number of patients to be admitted to each one in proportion to population of each county as state patients, and additional measures be taken to provide for a number of "pay patients," just as is being done in the hospitals for insane.

While it is possible that the eastern division may afford a site that will have advantages over the other divisions, yet not only in Middle, but also in West Tennessee can be selected a location that will give adequate local environment for a tuberculosis sanatorium. Such an institution, with a substantial building for administration purposes, and the patients to be cared for in "pavillion or cottage" wards, with perfect arrangements for ventilation, light, heating, sewerage, etc., will cost no more than our present hospitals for the insane, and with an annual appropriation for

maintenance after the buildings are erected, we can feel that our full duty to ourselves, our families, and our brothers and sisters who need help in their dire distress has been properly advanced in not only our own estimation, but in that of the world at large.

While we cannot expect at once to care for all cases in our state, yet we can make a start in the right direction, and each case cured will be that much added to the wealth of the state, and each patient so provided for is no longer a menace to his more fortunate fellows.

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### PREVENTION OF SUBSTITUTION: NEW YORK AND TENNESSEE.

IN 1901, at our suggestion, Hon. R. H. Harvey, M. D., an old army comrade, at that time representing Lawrence County in the State Legislature, introduced the following bill, which was passed at that session and duly became a law of this state. It was entitled "*An Act to Prevent the Substitution of Any Drug in Filling Physicians' Prescriptions by Any Drug-gists in the State*" :—

"Section 1. Be it enacted by the General Assembly of the State of Tennessee, That it shall be unlawful for any corporation, firm, or person, or any combination or association of corporations, firms, or persons engaged in the business of buying, compounding, and selling drugs and medicines to substitute any drug or medicine in lieu or instead of that given to the patient by the physician on the face of his prescription.

"Sec. 2. Be it further enacted, That it shall be unlawful for any agent or employee of such person, firm, or corporation, or association or combination of persons, firms, or corporations engaged in the business of buying and selling drugs in this State to substitute any medicine for the specific medicine mentioned in the physician's prescription.

"Sec. 3. Be it further enacted, That any person, firm, or corporation violating the provisions of this act, or aiding or abetting the violations of the same, shall be guilty of a misdemeanor, and upon conviction shall be fined not less than \$25 nor more than \$100 for each and every offense.

"Sec. 4. Be it further enacted, That this act take effect from and after its passage, the public welfare requiring it.

"*Approved April 3, 1901.*"

The State of New York has recently enacted and Governor Hughes has approved the following:—

"Section 401 of the Penal Code has been amended so as to read as follows:—

"Any person, who, in putting up any drug, medicine, or food or preparation used in medical practice, or making up any prescription, or filling any order for drugs, medicines, food, or preparation puts any untrue label, stamp, or other designation of contents upon any box, bottle, or other package containing a drug, medicine, food, or preparation used in med-

ical practice, or substitutes or dispenses a different article for or in lieu of any article prescribed, ordered, or demanded, or puts up a greater or less quantity of any ingredient specified in any such prescription, order, or demand than that prescribed, ordered, or demanded, or otherwise deviates from the terms of the prescription, order, or demand by substituting one drug for another, is guilty of a misdemeanor; provided, however, that, except in the case of physicians' prescriptions, nothing herein contained shall be deemed or construed to prevent or impair or in any manner affect the right of an apothecary, druggist, pharmacist, or other person to recommend the purchase of an article other than that ordered, required, or demanded, but of a similar nature, or to sell such other article in place or in lieu of an article ordered, required, or demanded, with the knowledge and consent of the purchaser. Upon a second conviction for a violation of this section the offender must be sentenced to imprisonment, for a term of not less than ten days nor more than one year, and to the payment of a fine of not less than ten dollars nor more than five hundred dollars. The third conviction of a violation of any of the provisions of this section, in addition to rendering the offender liable to the penalty prescribed by law for a misdemeanor, shall forfeit any right which he may possess under the law of this state at the time of such conviction, to engage as proprietor, agent, employee, or otherwise, in the business of an apothecary, pharmacist, or druggist, or to compound, prepare, or dispense prescriptions or orders for drugs, medicines, or foods or preparations used in medical practice; and the offender shall be by reason of such conviction disqualified from engaging in any such business as proprietor, agent, employee, or otherwise, or compounding, preparing, or dispensing medical prescriptions or orders for drugs, medicines, or foods or preparations used in medical practice.

"SECTION 402. This act shall not affect or impair any liability, penalty, or punishment under the provisions of section four hundred and one as the same existed prior to the time this act takes effect, but the same may be enforced, prosecuted, or inflicted as fully and to the same extent as though this act had not been passed; and all actions civil or criminal instituted under or by virtue of said section as the same existed prior to the passage of this act, and pending immediately prior to the taking effect hereof, may be prosecuted and defended to final effect in the same manner as though this act had not been passed.

"SECTION 403. This act shall take effect September first, nineteen hundred and seven."

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#### THE SOUTHERN MEDICAL ASSOCIATION.

THIS is the southern and gulf branch of the American Medical Association, and the successor of the Tri-State Medical Association of Georgia, Tennessee, and Alabama, will hold its next annual meeting in Birmingham.

Ala., Sept. 24, 25, and 26, inst. Dr. H. H. Martin, of Savannah, Ga., is President, and our esteemed editorial friend, Dr. Raymond Wallace, of Chattanooga, Tenn., is Secretary. The states included in this branch of the American Medical Association are Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, and Tennessee. All members of the county medical societies in affiliation with the respective state societies are eligible to membership. We give the following extracts from the Constitution and By-Laws:—

*Members.*—The members of this Association shall be members of the Component State Medical Societies and commissioned officers of the Medical Departments of the United States Army and Navy and Marine Hospital Service, elected by a two-thirds vote at any regular meeting.—*Constitution, Article III, Section 1.*

Applications for membership in this Association shall be made in writing to the Secretary, and shall be endorsed by two members of this Association, accompanied by satisfactory evidence of good standing in the respective State Societies.—*By-Laws, Chapter I, Section 4.*

*Dues.*—The dues of this Association shall be \$2.00 per year, payable annually in advance.—*By-Laws, Chapter III.*

*Sections.*—The scientific work of this Association shall be divided into three sections:—

1. The Section on Surgery, including General Surgery, Gynecology, and Obstetrics.
2. The Section on Practice of Medicine, including Materia Medica, Therapeutics, Pathology, Bacteriology, and Hygiene.
3. The Section on Ophthalmology, Otology, Rhinology, and Laryngology.—*Constitution, Article IV.*

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THE THIRTY-THIRD ANNUAL MEETING of the Mississippi Valley Medical Association will be held at Columbus, Ohio, October 8, 9, and 10, 1907, under the presidency of Dr. H. Horace Grant, of Louisville, Ky. The orator in medicine will be Dr. Geo. F. Butler, of Chicago, Ill., and the orator in surgery Dr. Frank D. Smythe, of Memphis, Tenn.; Henry E. Tuley, of Louisville, Ky., secretary.

The Association is doing commendable work in furthering the cause of medical research, by offering a prize of \$100 for the best original essay upon some medical or surgical topic. The Committee of the Association to decide upon this contest is composed of Drs. Hugh T. Patrick of Chicago, C. H. Hughes of St. Louis, and A. H. Cordier of Kansas City.

Preparations are being made on an extensive scale for the entertainment of members and guests by the profession of Columbus, with a competent and energetic Committee of Arrangements. A large number of interesting papers have been promised.

THE USE OF ADRENALIN DURING ETHER ANESTHESIA.—Recognizing that my experience in the use of adrenalin during ether anesthesia is but very limited, covering a course of only eighteen cases, and knowing the many fallacies attendant upon too early conclusions, I feel a great hesitancy in making this report. However, owing to the uniform result that has attended its use, I am prompted to do so now.

I found that 25 per cent. aqueous solution of the standard, 1 in 1,000, gave the best results, and that by first pouring ether in the towel cone and spraying the adrenalin solution on it, depending on the ether to vaporize it sufficiently for inhalation, was the best mode of administration. Three to six minute intervals are sufficient for its use and a total of from one-half to one ounce of this solution is enough for an operation lasting from thirty minutes to an hour. The effects are a more uniform etherization, the pulse becoming steadier, slower, and of better character more rapidly than under ether alone; respirations are quiet and regular, the bronchial secretions are practically checked, and the progress of the operation is not interrupted.

These cases were not selected, and among them were old alcoholics; two women over sixty, one of them nearly eighty years of age. Three were very long tedious operations, lasting over two hours, and in none of the series was any stimulation required during the anesthesia.

Recovery from the anesthetic was uniformly good; there was practically no post-operative shock, and no stimulation was needed in any one of the cases; only two patients vomited at all and very little nausea was complained of.

From the foregoing facts I conclude that owing to the contraction of the smaller vessels the bronchial glands secrete less mucus, and there is better aeration in the bronchioles and pulmonary vesicles, less ether is required to produce anesthesia, and there is less probability of ether pneumonia following. The adrenalin, acting generally from absorption, is a powerful stimulant; it materially lessens shock, lessens the capillary ooze at the field of operation, and is of great benefit to the much-weakened patient.—*Chas. S. Venable, M. D., in Va. Med. Semi-Monthly, Feb. 22, 1907.*

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"MEATOX"—GRANULATED DRY BEEF.—Mr. Chas. Marchand, so well and favorably known to the medical profession in connection with Peroxide of Hydrogen and its two special combinations of "Hydrozone" and "Glycozone," is now preparing a new and highly nutritious concentrated food to which he has given the above name. It is a concentrated, nitrogenous nutritive made of pure lean beef, is absolutely free from preservatives, and it keeps indefinitely even in unsealed containers. About a year ago while in New York we had the pleasure of calling on the manufacturer and saw on his desk an open, unsealed bottle that had been



in that condition for several months, and the "Meatox" was perfectly free from odor or any marks of decomposition.

It is of pale yellow color, with a faint odor of meat and an agreeable flavor imparted by celery seed. We regard it as superior to the extracts of beef which are mere stimulants and do not contain the nutritive elements, the assimilable proteids, as it does.

The following analysis made by Prof. I. V. Stanislaus, Ph. G., B. Sc., Phar. D., and Dean of the Medico-Chirurgical College of Philadelphia, is analogous to the analyses made by Messrs. Curtis & Tompkins, analytical chemists of San Francisco, Cal., Jno. C. Tresh, of the London Hospital Medical College, and Dr. Girard, Director of the Municipal Laboratory of Paris, France. They all agree in that it does not contain such preservatives as borates, salicylates, flourides, benzoates, sulphites, or saccharine sweetening. The analysis is as follows:—

" Moisture .....	4.80
" Celery flavoring (residue from alcohol extract)....	2.21
" Sodium chlorid .....	4.56
" Proteid matter .....	73.54
" Insoluble matter .....	9.43
<hr/>	
" Total .....	94.54
" Ash .....	4.96
<hr/>	
	99.50
" Loss .....	.50
<hr/>	
	" 100.00 "

Dr. Stanislaus concludes his analytical report with the following statement:—

" Submitting the enclosed analysis I take pleasure in stating that basing it on the protein content this is the most wonderful exponent of the modern nutrients extant. It is practically five times the meat value as a food, and as such will command the attention of every physiologist and hygienist interested in food products."

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BOUCHARD has truly said, " What makes possible the development of an infectious disease is not the chance meeting of microbe and man." This is occurring constantly, but there must be, in addition, a condition of the body favorable to the development and multiplication of the invading germ.

One of the most common conditions which so lowers the resisting powers of the system as to permit bacterial invasion is the toxemia of faulty metabolism. The ideal treatment of toxemia is by elimination. Alkalithia is the ideal eliminant and its use in selected cases of rheumatism, asthma, tonsillitis, chorea, eczema, urticaria, pruritus, and incipient Bright's disease will well repay a careful trial.



THE GLYCEROPHOSPHATES are indicated in all cases of nervous impairment due to overwork or excesses in asthenic nervous maladies, mental depression, and wherever it is desired to increase the nutrition of the nerve cells and stimulate their activity. In neurasthenic conditions characterized by vertigo, occipital headache, unsteadiness of gait, or inability for physical or mental effort, great improvement attends their use. In the premature advance of age, and in senility attended by general debility, the benefits from their protracted use are striking. They greatly relieve hysteria, and are useful in chronic neuralgia, sciatica, and convalescence from la grippe and acute infectious diseases. The most stable and economical of the preparations of the glycerophosphates is the glycerolé or so-called syrup of the *acid* glycerophosphates of lime, soda, potash, manganese, and iron with strychnine (Huxley), which is very concentrated, since 1 drachm (a physiologic dose) contains 4 grains of the combined salts. They are beginning to be prescribed in conjunction with the formates of the same salts by some French physicians, since these are great muscle tonics, stimulating the voluntary and non-striated muscular system.—*International Therapeutics*, October, 1906.

HAY FEVER.—Dr. E. Fletcher Ingals, Chicago, writes: The prescription for hay fever in the department of Therapeutics in the *Journal*, July 6, 1907, p. 84, and credited to me, I am unable to remember as having recommended at any time, for it certainly is objectionable in several ways: 1. I have not tested resorcinol in this connection. 2. The adrenalin chlorid, one half grain to two ounces, would be very irritating in most cases of hay fever. 3. The boric acid I do not use in this connection, as I find the biborate of soda much better. I have found the following prescription very useful in some cases and think it well to try it in every case:—

	gm.	
R Cocainae hydrochloridi .....	15 or	gr. iiss
Sodii boratis .....	30	gr. v
Suprarenalin (1-1000) .....	4	3i
Glycerini .....	2	5ss
Aquae camphorae ad.....	30	3i

M. Sig.: Use as a spray to the nose four or five times daily, or oftener if needed.—*Journal of American Medical Association*, Aug. 10, 1907.

CHEMICAL FOOD is a mixture of phosphoric acid and phosphates, the value of which physicians seem to have lost sight of to some extent in the past few years. The Robinson-Pettet Co., to whose advertisement (on page 17) we refer our readers, have placed upon the market a much improved form of this compound, "Robinson's Phosphoric Elixir." Its superiority consists in its uniform composition and high degree of palatability.

THE CURE OF A CASE OF OSTEOMALACIA.—In an article on the suprarenal glands and osteomalacia, in the *Munch. Med. Wochenschrift*, 1907, p. 278, L. M. Bossi, of Genoa describes the almost marvelous cure of a serious case of osteomalacia by subcutaneous injections of adrenalin. The patient was a multipara, thirty-eight years of age, who was *enceinte* in the eighth month and had a well defined osteomalacia. After seven hypodermic injections of adrenalin, each of which consisted of 1-2 cg. of adrenalin of the 1-1000 solution, the patient fully recovered.

PAIN.—This is the condition we are most often called upon in a hurry to relieve. Our therapeutic measures employed will be gauged by the cause, location, severity, etc. A hot water bag should always be accessible. Hypodermics of morphine should be used as sparingly as possible. *Papine* is an excellent pain-reliever that is devoid of the danger and unpleasantness of ordinary opiates. It relieves pain promptly, but does not produce narcosis, constipation, etc.—*W. T. Marrs, M. D., in the Medical Herald.*

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## Reviews and Book Notices.

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DISEASES OF INFANCY AND CHILDHOOD. Their Dietetic, Hygienic, and Medical Treatment.—A Text-Book designed for Practitioners and Students in Medicine. By LOUIS FISCHER, M. D., Visiting Physician to the Willard Parker and Riverside Hospitals, of New York City; former Instructor in Diseases of Children at the New York Post-Graduate Medical School and Hospital, etc., etc.; Fellow of the New York Academy of Medicine. With 303 text illustrations, several in colors, and twenty-seven full-page half-tone and color plates, 979 royal octavo pages. Extra cloth, \$6.50, net; half-morocco, \$8.00, net. *Sold only by subscription.* F. A. DAVIS COMPANY, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

Dr. Fischer's advantages while teaching diseases of children at the New York Post-Graduate Medical School and Hospital, have enabled him to present a very valuable contribution on so important a subject. Clinical observations in Europe, as well as while on duty as Attending Physician to the large services of the Riverside and Willard Parker Hospitals, have afforded additional advantages.

The book has been divided into twelve parts: I. The New-born Infant; II. Abnormalities and Diseases of the Newly-born;

III. Feeding in Health and Disease; IV. Disorders Associated with Improper Nutrition; and Diseases of the Mouth, Esophagus, Stomach, Intestines, and Rectum; V. Diseases of the Heart, Liver, Spleen, Pancreas, Peritoneum, and Genito-Urinary Tract; VI. Diseases of the Respiratory System; VII. The Infectious Diseases; VIII. Diseases of the Blood, Lymph Glands or Nodes, and Ductless Glands; IX. Diseases of the Nervous System; X. Diseases of the Eye, Ear, Skin, and Abnormal Growths; XI. Diseases of the Spine and Joints; XII. Miscellaneous.

The greatest stress has been laid on the diagnosis, symptoms, and treatment which are so necessary at the bedside. Pathology and more especially bacteriology have been given ample consideration. In this work, infant feeding in all its phases, maternal nursing, wet nursing, and hand feeding with all home modifications for bottle feeding, are carefully considered and given special attention. The disorders arising from improper feeding have been given prominence owing to the importance of the subject.

The growing child is very susceptible to infectious diseases, hence this important part has received most earnest attention. The diseases of the digestive tract have in their turn been considered. The text is elucidated by a number of wood-cuts, half-tones, and colored illustrations, many of them original.

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THE AMERICAN PRACTICE OF SURGERY. A Complete System by Representative Surgeons of the United States and Canada.—Edited by JOSEPH D. BRYANT, M. D., and ALBERT H. BUCK, M. D., of New York City. Royal 8vo, cloth, Vol. III., pp. 775. Price per volume, in cloth, \$7.00; leather, \$8.00; morocco, \$9.00. Wm. Wood & Co., Publishers, New York, 1907.

The third volume of this splendid series devoted strictly to *American Surgery* we regard as the best yet published. The contributors are Duncan Eve, M. D., Vanderbilt University, Nashville, Tenn.; John Shelton Horsley, M. D., of the Medical College of Virginia, Richmond, Va.; Charles F. Mason, M. D., Surgeon U. S. A.; John Chadwick Oliver, M. D., Miami Medical College, Cincinnati, O.; Charles Fairbank Painter, M. D., Tufts Medical School, Boston Mass.; Roswell Park, M. D., LL. D., Medical Department of the University of Buffalo, Buffalo, N. Y.;

George A. Peters, M. B. (Tor.), F. R. C. S. (Eng.), Toronto, Can.; Alexander Primrose, M. B., C. M. (Edin.), M. R. C. S. (Eng.), Toronto, Can.; George Gibier Rambaud, M. D., Director of the New York Pasteur Institute; Channing C. Simmons, M. D., Massachusetts General Hospital, Boston, Mass.; and T. Turner Thomas, M. D., University of Pennsylvania, Philadelphia, Pa.

Part 11 consists of 62 pages devoted to Poisoned Wounds, including the Bites and Stings of Insects; and Rabies.

Part 12 consists of 332 pages very ably considering the following subjects: Fractures, Pseudoarthrosis, Inflammatory Affections of Bones, Non-Inflammatory Affections of Bones, Syphilitic Affections of the Bones, and Tumors Originating in Bone.

Part 13, comprising 367 pages, considers Chronic Non-Tuberculous and Non-Traumatic Inflammation of Joints, Tuberculous Disease of the Bones and Joints, and Wounds of Joints. A very copious and complete index of about 15 pages completes this splendid volume. Each article is splendidly and profusely illustrated by wood-cuts, half-tones, and colored plates; many being entirely new and original. Each article gives the views of each individual author as well as a compilation of the latest established facts regarding the subject under consideration. We can especially commend the article on Poisoned Wounds, etc., by Maj. Charles F. Mason, M. D., Surgeon U. S. A.; and that on Rabies by Dr. George G. Rambaud of New York City.

The article on Fractures by our fellow townsman, Duncan Eve, M. D., Professor of Surgery Vanderbilt University, we consider the best extant. It is a subject in which he has been greatly interested since the beginning of his professional career, and to which he has devoted a great deal of time, study, and attention. It is thoroughly practical, giving the latest and most approved views as to pathology and diagnosis and treatment, including original observations of the author. These three articles alone are well worth the full price of the volume, to say nothing of the other important articles contributed by some of the ablest surgeons of America.

**INTERNATIONAL CLINICS:** A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to Students and Practitioners by leading members of the medical profession throughout the world.— Edited by WARFIELD T. LONGCOPE, M. D., Philadelphia, Pa., U. S. A., with the collaboration of William Osler, M. D., Oxford; John H. Musser, M. D., Philadelphia; Frank Billings, M. D., Chicago; Chas. H. Mayo, M. D., Rochester, Minn.; A. McPhedran, M. D., Toronto; Thomas M. Rotch, M. D., Boston; John G. Clark, M. D., Philadelphia; J. W. Ballantyne, M. D., Edinburgh; James J. Walsh, M. D., New York; John Harold, M. D., London; Richard Kretz, M. D., Vienna; with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Vol. II, seventeenth series. Octavo, 312 pages, illustrated in colors and black and white. Cloth, \$2.00; half leather, \$2.25. J. B. Lippincott & Co., Publishers, Philadelphia, 1902.

We are gratified to call the attention of our readers to the very excellent second volume of the seventeenth series of *International Clinics*. We find that it contains four excellent articles on treatment, four on medicine, four on surgery, four on gynecology, two on pediatrics, four on neurology, and three on pathology. Such articles as that by Dr. J. Madison Taylor, that of Dr. George Dock, that by Dr. H. S. Clogg, and that by Dr. Joseph B. DeLee respectively, on Management of Exhaustion States in Men, Laparotomy Rather than Paracentesis in Ascites, Perforative Duodenal Ulcer, and Post-partum Hemorrhage and Its Treatment, are well worth the price of the volume, to say nothing of the views of John A. Bodine, M. D., on General Anesthesia in the Radical Cure of Inguinal Hernia and Local Anesthesia in Major Operations, Dr. J. W. Wainwright's article on Asepsis and Antisepsis, and other valuable essays and papers on equally important subjects.

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**DISEASES OF THE RECTUM: THEIR CONSEQUENCES AND NON-SURGICAL TREATMENT**, by W. C. BRINKERHOFF, M. D., published by Orban Publishing Company, of Chicago, Ill. Pages, 207. Price, \$2.00.

This book by Dr. Brinkerhoff is only a plain statement of facts, based on experiences and observations in special practice, and was

published for the purpose of directing attention to the fact that diseases peculiar to the rectum should not be neglected or treated with indifference, either by the physicians or the afflicted.

The author stresses the fact that treatment should abound in thoroughness, and at the same time, if possible, a high regard should be shown for nature's laws in the avoidance of the mutilation of bodily structures by surgical procedures. That the accomplishment of this object is best obtained by the *Injection Method of Treatment* for hemorrhoids, is truly proven by the facts set forth in numerous cases cited wherein the heroic methods (surgical) were deemed, even by their own devotees, too dangerous to employ.

The writer recognizes the occasional necessity for rectal surgery, and does not hesitate to employ or recommend it where unavoidable, but at the same time disapproves of its use in otherwise curable cases, which comprise the large majority of those wherein this disease of the rectum exists, relying mainly upon the injection method. Artificial feeding is discussed for the benefit of anemics. This section of the work contains directions for the home preparation of a combined food and remedy calculated to give strength to the frail and anemic, without in any way disordering the stomach. The author makes no attempt at technical phraseology, but on the contrary, simplicity of diction and description is adhered to in order that his writings may be more generally understood.

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DISEASES OF THE STOMACH.—By DR. I. BOAS, Specialist in Gastro-enteric Diseases in Berlin, Germany. The sole authorized English-American edition from the latest German edition, by ALBERT BERNHEIM, M. D. (Freiburg, Germany), Assistant to the late Dr. D. D. Stewart at the Philadelphia Polyclinic Hospital and Post-graduate School, as Instructor in the Department of Diseases of the Stomach and Intestines, etc., etc. Appropriately illustrated with five full-page plates and sixty-five engravings in the text. 730 royal octavo pages, extra cloth, \$5.50, net; half morocco, \$7.00, net. *Sold only by subscription.* F. A. Davis Company, Publishers, 1914 - 16 Cherry Street, Philadelphia, Pa.

The first edition of Dr. Boas's splendid work appeared in 1890, and successive editions have rapidly followed, it having been so

highly appreciated by the medical profession. It is especially adapted to the use of the general practitioner, to whom it conveys modern diagnostic and therapeutic methods, so concise and yet complete, the result of the observations, labor, and diligence of this able German authority.

We make the following extract from the translator's preface to this, the latest English-American edition:—

“Dr. Boas's treatise on diseases of the stomach has experienced a most astonishing popularity, and that not only in Germany but also in other European countries. It has been translated into Russian, Italian, and Spanish, a fact which by itself is praise enough for the book. I trust that the book in its English dress will find the same acknowledgment as it has found abroad.

“Dr. Boas's book is, as Dr. Boas himself in his preface says, particularly a book for the general practitioner, but also for the specialist and student. Many physicians who took a post-graduate course in the Philadelphia Polyclinic have often expressed a desire for a translation of Boas's book.”

This latest edition is handsomely printed on splendid paper, excellently bound, and contains five full-page plates with 65 illustrations. We cannot commend it too highly.

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**SCHLEIF'S MATERIA MEDICA AND THERAPEUTICS.**—A Pocket Text-Book of Materia Medica, Therapeutics, Prescription Writing, Medical Latin and Medical Pharmacy. By WILLIAM SCHLEIF, Ph. G., M. D., University of Pennsylvania, Philadelphia. New (3rd) edition, 12mo. 470 pages. Cloth, \$2.50, *net*. Lea Brothers & Co., Philadelphia and New York, 1907.

**HARE'S THERAPEUTICS.**—A Text-book of Practical Therapeutics, with Especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By HOBART AMORY HARE, M. D., B. Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, Physician to the Jefferson Hospital, etc. New (12th) edition, enlarged and thoroughly revised to accord with the eighth decennial revision of the U. S. Pharmacopœia. In one octavo volume of 939 pages, with 114 engravings and four colored plates. Cloth, \$4.00, *net*; leather, \$5.00, *net*; half morocco, \$5.50, *net*. Lea Brothers & Co., Philadelphia and New York, 1907.

The simultaneous appearance of two books on different phases

of a large subject renders it advantageous to consider them together. "Schleif" is primarily a text-book on the fundamentals, devoting most of its space to Materia Medica, Pharmacology, Prescription Writing, Medical Latin, etc. "Hare" is equally a book for students and also for practitioners. It devotes one half of its space to remedial agents, including both drugs and non-medicinal measures as well as foods, and the remaining half to diseases and their treatment, with copious and precise directions. Both parts are alphabetically arranged and fully cross-referenced, so that all information on any point can be quickly found. The "Index of Diseases and Remedies," with its suggestive annotations, is additionally helpful in practice. Dr. Hare's faculty for perceiving the pith of a matter and presenting it clearly is reflected in all his works, and is the basis of their great popularity. For instance, this is the twelfth edition of his Therapeutics in seventeen years, and of most of the editions several large printings have been required. Though it is the second edition since publication of the new Pharmacopœia, the author has not been content with a perfunctory revision, but he has, on the contrary, scrutinized every line and made changes and improvements wherever necessary to represent his very progressive subject.

Reverting for a moment to these two books for the purpose of considering them together from the student's standpoint, it may be said that they fit into each other very advantageously. Present-day curricula divide the subject very much on the lines here followed: a course in the pure Materia Medica and annexa in the first years, and then a course on the clinical applications, or Therapeutics proper. These two books contain more information than it is possible to put conveniently into a single volume. They divide it conformably to the best practice in teaching, and together they cover the whole subject.

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THE PRACTITIONER'S LIBRARY OF GYNECOLOGY, OBSTETRICS, AND PEDIATRICS.

— *The Practice of Obstetrics* in Original Contributions by American Authors; edited by REUBEN PETERSON, A. B., M. D., Professor of Obstetrics and Gynecology in the University of Michigan, Ann Arbor, Mich.; Obstetrician and Gynecologist in Chief to the University of



Michigan Hospital. Royal 8vo., pp. 1087, illustrated with 503 engravings and 30 full page plates, price in cloth, \$6.00; leather, \$7.00; half morocco, \$8.00. Published by Messrs Lea Brothers & Co., Philadelphia and New York, 1907.

This volume of the series constituting the Practitioner's Library on Gynecology, Obstetrics, and Pediatrics is a most valuable addition to the year's medical literature. From the author's preface we make the following extract:—

"The volume on Obstetrics is designed above all to be practical; but theory, where it is the key to practice, has not been neglected. Each contributor has been free to develop his subject in accordance with his own experience, following, of course, a plan carefully designed to ensure the completeness and uniformity of the successive chapters, whereby ease of consultation is promoted and the domain is adequately covered as a whole. The contributors are well known in the departments on which they have written; and as teachers and at the bedside have gained the experience, without which no statement can be authoritative.

"The simplest and most logical arrangement has been adopted. As the normal must precede the abnormal, the physiologic aspects of each condition are fully considered, and the pathologic or abnormal side is treated in equal, or, when necessary, even greater detail. Especial attention has been given to the series of illustrations. It is abundant and largely selected from original photographs taken from life. The facilities at the editor's command have rendered it possible to an unusual degree to make selections specifically representing the points mentioned in the text. Obstetrics is peculiarly a subject in which apt and direct illustrations are of practical value. Due credit has been given for any pictures from other books and monographs."

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THE PRACTITIONER'S LIBRARY OF GYNECOLOGY, OBSTETRICS, AND PEDIATRICS.

*The Practice of Pediatrics* in Original Communications by American and English Authors; edited by WALTER LESTER CARR, A. M., M. D., Consulting Physician to the French Hospital, New York; to the New York Eye and Ear Infirmary; Visiting Physician to the New York City Children's Hospitals and Schools; Member of the American Pediatric Society; formerly Editor of the *Archives of Pediatrics*. Royal 8vo. Cloth. pp. 1014. Illustrated with 199 engravings and 32 full-

page plates. Price \$6.00; in leather, \$7.00; half morocco, \$8.00; Published by Messrs. Lea Brothers and Company, Philadelphia and New York, 1907.

This splendid volume on *Pediatrics*, one of the series of the Practitioner's Library of Gynecology, Obstetrics, and Pediatrics, edited by Dr. Walter Lester Carr, is from the pens of well-known authorities in America and England, who have been selected as eminently fitted to write on the subjects assigned to them. These authors have kept in mind: first, the clinical picture of a disease, and second, the best methods for its treatment. This plan has allowed each author to give his own observations of a disease, and the therapeutic measures which have resulted in the greatest success. Naturally this adds to each contribution a personal element which is entitled to consideration, as the authors are, without exception, clinicians and teachers of wide experience.

In the arrangement of the volume more space than usual has been allotted to infant feeding, diseases of the alimentary tract, disorders of nutrition, respiration, and circulation, and to contagious diseases, the object being to describe the conditions most intimately associated with disease in children, and not those which are more common in adult life and found but rarely in childhood. In a word, the line between pediatrics and general medicine has been carefully drawn, so that space has thereby been found for a full presentation of this specialty in a convenient volume. In some sections extra space has been given to methods of diagnosis which are now regarded as essential by physicians who wish to be exact in their work, but the details of which are not readily accessible elsewhere. On the other hand, mooted pathological questions have been omitted, and the pathology stated by each author is limited to what is regarded as essential for a comprehensive knowledge of the disease with which it is associated.

The splendid paper, excellence of press-work both as to letter-press and illustrations, together with such beautiful binding, cannot be excelled, and the three volumes of the Practitioner's Library will make a most handsome and valuable addition to any physician's table or book-shelves.

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EDITOR AND PROPRIETOR

VOL. XXIX.

NASHVILLE, OCTOBER, 1907.

No. 10

## *Original Communications.*

### HYPEREMESIS GRAVIDARUM.\*

BY J. A. ALTMAN, M. D., OF NASHVILLE, TENN.

THIS means a morbid exaggeration of the vomiting which ordinarily occurs during pregnancy. No sharp line can be drawn between the physiologic vomiting of pregnancy and the lighter forms of hyperemesis. Under this term we include all cases occurring in pregnancy that so seriously impair the nutrition of the patient as to require our interference. Hyperemesis is fortunately a not very frequent condition, but it occurs sufficiently frequent, and is so troublesome and serious when it does occur, that it should be of great interest to all who assume the management of pregnant women.

Until recent years the true conditions that produce hyper-

\* Read at meeting of Nashville Academy of Medicine, Sept. 10, 1907.

emesis were little understood. In fact the essential cause is not known at the present time, notwithstanding the great strides of recent investigations. It is now generally conceded that, at least, the gravest types of hyperemesis are due to toxemia. Hyperemesis gravidarum, eclamptic toxemia, and acute yellow atrophy of the liver are very closely allied.

According to Williams we divide this condition into three varieties, viz., the reflex, the neurotic, and the toxic. We frequently have two or more of these varieties combined. This division better enables us to understand the etiology and treatment of hyperemesis, which is the part of the subject to which I wish to call particular attention.

The reflex variety is due to some abnormality of the genital tract or ovum, which renders it amenable to treatment if properly applied. The pelvic conditions which may bring about this variety are uterine displacements, incarceration of the growing uterus below the sacral promontory, a hardened or cicatricial cervix, possibly a granular cervix, endometritis, metritis, and diseased adnexa. No doubt these pathological conditions in the pelvis and uterus may contribute to hyperemesis in a sensitive patient, but I do not think they are of very great importance.

The neurotic variety of hyperemesis depends upon the existence of a neurosis, with no demonstrable lesion, but is quite frequently allied to hysteria or neurasthenia. I have found it to be the most frequent form of hyperemesis, but finally yields to the modified rest cure, combined with well directed and persistent suggestive therapeutics.

The purely toxic variety is fortunately not very frequent, but always quite grave. It is due to auto-intoxication brought about by the characteristic changes of metabolism, either fetal or maternal, that always take place in pregnancy. A number of recent investigators have called attention to the similarity that exists between the severe types of this variety and the toxemia of eclampsia and acute yellow atrophy of the liver. The pathological changes that are found in the fatal cases are in the liver, and in all these conditions degenerative changes are observed which soon lead to necrosis of the liver cells. They differ somewhat in

location but show conclusively, I think, that they are, at least, allied affections. Less important changes, but of a similar character, are found in the kidneys. As the reflex and neurotic types rarely prove fatal their pathology is not known, except the pelvic conditions referred to above.

The diagnosis of hyperemesis gravidarum presupposes a positive diagnosis of pregnancy and the exclusion of other conditions that may cause violent vomiting, such as nephritis, gastric ulcer, and cancer. When this is established, we should then determine the variety of hyperemesis. When we have a severe case of vomiting that gives no history of any neurosis, and find one or several of the pelvic conditions before mentioned present without the pronounced symptoms of toxemia we may conclude that the case is reflex, which is usually relieved by correcting the pelvic abnormalities. The neurotic type is usually more severe than the reflex, and is preceded by a history of nervousness, hysteria, or neurasthenia. There is little or no pelvic pathology.

In the toxemic variety there is no neurotic history, the vomiting is frequent and soon continues day and night, rapid emaciation, and becomes markedly cachectic, sometimes very much jaundiced. The most important symptoms, however, are the changes that take place in the urine. The flow is scanty, the nitrogen excreted as urea is markedly decreased, while the amount of nitrogen excreted as ammonia is usually increased. Hence the importance of frequent and accurate examinations of the urine in all cases of hyperemesis, especially of the toxemic variety. The ammonia coefficient is not always a sure index which demands a termination of pregnancy, but it is a very valuable danger signal. When the ammonia per cent. is above ten and still rising, the clinical symptoms are usually such that we are forced to empty the uterus. A few exceptions have been reported, but I believe more lives have been sacrificed on the part of the mother than babies saved.

I have had four cases in my experience that I think illustrate the three varieties of hyperemesis, as follows:—

*Case 1.*—Mrs. S., primipara, 29 years of age. No nervous history in herself or family. About sixth week she began to vomit in the morning. This gradually progressed until the end

of the third month, when the vomiting became severe and almost continuous. Bimanually I found the uterus retrodisplaced and incarcerated below the sacral promontory. This was reduced after putting her in knee chest position. The vomiting at once improved and ceased entirely in a short time. This was purely reflex.

*Case 2.*—Mrs. K., the wife of a dentist, came under my care at the end of the second month of pregnancy, with hyperemesis. She belonged to a neurotic family and was quite nervous before marriage. I could find no pelvic abnormality. I decided that it was a severe case of the neurotic variety. She was anxious for a child, which was in my favor. I at once put her to bed and excluded company, thereby eliminating all gossiping women. I sought to gain her utmost confidence. I assured her that the medicine I was going to give her from time to time was going to control that terrible nausea in due time. I gave her calomel and salts followed by laxatives as needed. Tr. iodine in crushed ice was retained and helped to control the gastric catarrh. After the fourth month she was sufficiently improved that I allowed her to get up. Excepting a few vomiting spells occasionally, she went on to term and had an uneventful labor. Two years later she again conceived, in another state, with a repetition of the vomiting, which defied all the skill of three doctors until they finally had to empty the uterus to save her life. Two and one half years later she again conceived and as soon as the vomiting became severe she came under my care. I conducted the case about as in the first pregnancy and succeeded in carrying her through to term, after two months in bed. Subsequently she again conceived, and I was informed that an abortion was resorted to after all other means had failed to relieve. I think this case represents a severe neurotic type.

*Case 3.*—Miss S., age 32, came to me from an adjoining town, very much emaciated, decidedly cachectic, and very pronounced vomiting. She gave a negative menstrual history, and being unmarried I did not suspect at first the true condition. I sent her to the hospital thinking she probably had carcinoma of the stomach. She was sent to the medical ward and was ordered a

test meal and the stomach tube. She heard the directions given to the nurse and left the hospital before anything could be done. I did not see her again for two or three weeks, when she again entered the hospital. We then decided to make a pelvic examination, and found a pregnant uterus, two and one half months advanced. Her condition became worse in spite of all treatment. We decided to empty the uterus, but she aborted spontaneously. Her condition did not improve, and she died on the fifth day following the abortion. We failed to get an autopsy, but I feel sure that this was of the toxemic variety.

*Case 4.*— Mrs. B., the wife of another dentist. Family history good. In her first pregnancy the vomiting began early and at frequent intervals. No treatment was of any avail. Her condition was so extreme that the uterus was emptied, but her life was despaired of for several days subsequently. She finally made a slow recovery.

About two years later she again conceived, and shortly afterward she began to vomit. She was given two treatments by electricity which stopped the vomiting at once. Two weeks later she aborted. Evidently the electricity destroyed the fetus.

In due time she again conceived and came under my treatment as soon as the nausea began. With her previous history before me, and the fact that she was anxious for offspring, I took great care to control the hyperemesis that I knew was coming. I moved her to the hospital where she was in the hands of a competent nurse, excluded all company, and tried to stimulate all the emunctories. The uterus was retroverted and the cervix granular. I replaced the uterus and held it by tampons, applied nitrate of silver to cervix, and finally dilated the cervix slightly with branch dilators. In the meantime, I tried strict diet, and various drugs with no benefit. Finally I gave her cold boiled ham and corn bread, according to Louis Kolipinski. She relished it and retained it, the first thing she had retained for three weeks. She continued to retain these for one week and improved very much. During this time her ammonia coefficient remained stationary for a week at about seven per cent. She then returned home, but soon became much worse and we determined to empty the uterus

when the ammonia reached eleven per cent. and her clinical symptoms became alarming. I emptied the uterus by packing it with gauze for thirty-six hours. When this was removed the cervix was sufficiently dilated to pass the finger, detach the ovum, and remove with ovum forceps. In the first three months I think it better to empty slowly in this way without an anesthetic. A thorough examination of the urine was made frequently by Dr. Wm. Litterer. The diminished urea and increased ammonia was of great value in connection with the clinical symptoms. This was a very severe toxemic case which would surely have died if I had waited much longer to empty the uterus.

The treatment of hyperemesis gravidarum depends upon the variety. The reflex variety will nearly always get well after correcting the pelvic abnormalities. The neurotic type can be finally relieved by proper hygienic, dietetic, and medicinal treatment, combined with mental suggestion. The latter is by far the most important. If you fail to properly impress your patient you had as well get out of the case. Most of the severe neurotic cases are to a certain extent toxemic.

The toxemic variety is much more grave and does not usually yield to treatment, but ultimately leads to a termination of pregnancy. We should keep in mind that the essential etiological factor is toxemia. The indications for treatment are to cut off the supply of toxins by limiting the materials suitable for their development, to stimulate those organs largely employed in maintaining normal metabolism, to aid the excretions in throwing off the toxins from the blood. This is accomplished by rest in bed, exclusion of all visitors, a light diet at first, even withdrawing all food by the stomach, but allowing a liberal supply of water. Small doses of calomel followed by salines and repeated from time to time, and colonic flushings with normal salt solution. If the patient's condition becomes critical, don't fail to give an intravenous infusion, stop all food by the mouth and resort to nutrient enemas. Procure sleep by morphia hypodermically or chloral by rectum. If the above indications have been faithfully and intelligently carried out and the patient's condition becomes dangerous, the uterus should be emptied before it is too late.



Almost every drug in the *materia medica* has been recommended for this condition. Few, if any, have any effect *per se*; but those that stimulate the emunctories may be beneficial by ridding the system of the toxins.

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## WATER AS A THERAPEUTIC AGENT.

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BY OTTO JUETTNER, M. D., PH. D., CINCINNATI, OHIO.

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I PROPOSE to discuss with you the virtues of the cheapest, most easily obtained, and yet most generally useful and most intensely effective remedial agent, namely, water. My way of introducing the subject to you indicates plainly enough that I am an ardent advocate of hydro-therapeutics, giving to this method of handling disease the first and most prominent place among the numerous means which modern medicine supplies. I am firm in my belief —

1. Because hydrotherapy is a distinctly physiological method, thoroughly scientific in its theory, rational in its application, and hence necessarily superior to drugs and other empirical methods.
2. Because the results speak eloquently for the excellence of the method, and from a practical point of view, we all agree that the proof of the pudding is in the eating.

Hydrotherapy deals principally with the external uses of water, *i. e.*, the application of water to the skin. In and of itself water has no remedial power or quality. It serves, however, as a carrier of certain physical forces and properties which are capable of producing characteristic and profound physiological effects upon the system through the instrumentality of that most delicate and responsive of finely organized structures, namely, the skin. Water is the most available agent to serve as a carrier of heat and cold. This fact furnishes the practical basis of hydrotherapy and indicates at the same time that for all practical purposes hydrotherapy is synonymous with thermotherapy or the science of producing physiological effects by the rational employment of various degrees of temperature.

The idea of temperature is intimately bound up in and inseparable

arable from all vital processes. Ciliary motion, ameboid movement, the contractions of the infusoria, the contraction and relaxation of muscles, physio-chemical changes, physiological processes, in fact all outward manifestations of life are affected by and dependent upon temperature. It would take us too far from the practical aspect of the subject to go into the minutiae of physiological and biological research by which Winternitz and other master-minds in medicine established hydrotherapy as a science. To a mind which is fond of physical exactness there is no more attractive subject than the theory of thermic effects upon the organism explaining the surprising results achieved by the clinician at the bedside. I will have to confine myself to the general outlines and refer those of you who are interested to Winternitz's great work or to my own humble effort on the same subject, published some years ago.

What is the effect of heat and cold on the skin? Impressions of heat or cold or, to speak technically, thermic stimuli perceived by the cutaneous nerves are communicated to nerve-centers situated in the brain, cord, and in the peripheral ganglia. Through these the stimulus is reflected to the vaso-motor nerves of the area which received the thermic impression originally. In this way the circular muscular fibers of the arterial walls within the area acted upon are made to contract or relax, as the case may be. A hot application increases the arterial blood supply by relaxing the muscular walls of the arteries. A cold application contracts the vessels, producing arterial anemia and, correspondingly, venous congestion. The skin becomes cyanotic. When I say *cold* or *warm* application I mean neither intense cold nor intense heat, because when a certain degree of either is reached, the physiological effect as such ceases and suspension of the manifestations of life supervenes. The affected part dies. I speak of degrees of heat or cold compatible with life. Thus we render a part comparatively bloodless by an application of cold. The arteries contract, the blood is crowded back into the deeper vessels and we have a collateral hyperemia of some part at some distance from the area exposed to the action of cold. Thus the application of cold water to the lower extremities lessens the quan-

tity of arterial blood in the extremities, crowding the blood back into the vessels of the abdomen, which in this way become engorged. Heat applied to the lower extremities relaxes the walls of the blood-vessels, the amount of blood increases enormously, necessitating a coincident lessening of blood supply in the trunk.

It has been estimated that one third of the whole blood-mass can be assembled in the abdominal wall by a thermic stimulus applied to the abdomen. That these considerations are not mere guess work but scientific facts has been amply shown by experimental demonstration. Schueller exposed the meninges of a rabbit by trephining. Whenever the body of the animal was immersed in hot water the vessels of the pia mater contracted, showing that the amount of the intra-cranial blood supply was at once diminished. Whenever the body of the animal was immersed in cold water, the meningeal vessels became engorged. This is an illustration of a term frequently used by hydrotherapists, namely the derivating effect of water applications, the Latin verb "derivare" meaning "to draw away from." It refers to the action of thermic stimuli drawing blood away from any part—to all intents and purposes a bloodless venesection.

Keeping in mind the facts mentioned, let us see what happens within the area when the thermic stimulus is applied. Suppose that a cold water-application is made to a limited area, will the blood vessels of the part remain contracted indefinitely? The action of cold is continuous. If the application of cold lasts two minutes the local anemia will last for the same length of time. The moment the action of cold ceases, the blood vessel walls, which have been contracted, begin to dilate, the blood rebounds into the gradually distending vessels and a condition of hyperemia in the affected area is produced. The vessels do not only return to their normal size but are over-distended with arterial blood. Place a piece of ice on the skin and leave it for a few moments. Immediately anemia is produced. The moment the ice is removed hyperemia supervenes, the area becomes red.

This peculiar process depending upon the elasticity of the vessel walls and characterized by hyperemia following anemia, is called reaction, and is the pivotal point upon which the science of

hydrotherapy revolves. Let us understand this most important point: first there is anemia of a certain area due to the action of cold applied to that area. This anemia is coincident with hyperemia of some other region whither the blood has been forced. The moment the action of cold ceases the conditions are reversed. The primary area gradually becomes hyperemic, the secondary area anemic. This reversion of conditions is due to the phenomenon called by hydrotherapists reaction. Thus it is that we produce hyperemia of the skin by a cold application. The immediate effect is anemia. But we aim at producing an intense reaction and thus the region where the cold application was made receives an enormous increase in its blood supply.

Let me illustrate this point by a clinical example. The patient is a brain worker, suffering from congestive headaches and insomnia. We envelop the lower extremities of our patient in a cold moist sheet and place on the outside of the sheet a dry woolen blanket. What takes place when this application commonly known as a "cold moist pack" is made? The cutaneous vessels of the lower extremities are contracted and a general anemia of the packed area results. The temperature of the body, aided by the heat-producing woolen blanket, after a few moments overcomes the temperature of the moist sheet. The sheet becomes warm and an intense reaction takes place, causing hyperemia of the lower extremities. The enormous increase of the blood supply in the lower extremities is followed by partial depletion of the vessels in the upper part of the body. Objectively the derivating action of this pack is evidenced by somnolence of the patient. The headache disappears and the patient falls asleep. The brain has become anemic. The larger the area acted upon, the more intense the effect. Thus we might apply a pack from the feet to the knees, or up to the hips, to the crest of the ileum, to the lower border of the ribs, to the mamillary line or even up to the neck. The principle is the same. In all these applications we aim at reaction primarily and at a derivating effect upon some distant part of the body secondarily.

What is the effect of an artificially produced hyperemia of the skin? 1. It increases the functional activity of the skin as an

organ of excretion. 2. It unloads one or more of the internal parts of the body.

The first point suggests the value of hydrotherapy as an adjunct of nature in the cure of disease because nature's most powerful weapon in combating disease is excretion. The slow process of oxidation constantly going on in the organism is to all intents and purposes the triple function of nutrition, assimilation, and excretion. Nature fights disease by intensifying and accelerating the combination of the body. The body burns up and regenerates itself faster, the metamorphosis of tissue takes place more rapidly. This process is called fever and manifests itself by an elevation of the temperature.

Fothergill once said, "The greatest problem in medicine is how to produce fever." The hydrotherapist produces artificially the fever-process within the organism by hastening the change of tissue and by augmenting and accelerating excretion. Fever is the greatest boon in the course of disease because it is essentially a reparative effort on the part of nature. Thus we are prepared to appreciate the value of thermic or hydriatic agents in the treatment of diseases.

Since by means of water we are able to increase, diminish, or modify the blood-supply of any region of the body, we are ready to admit that water must be an antiphlogistic or depletant of cardinal virtue. In a case of pneumonia during the stage of congestion we are positively able to abort the inflammatory condition by depriving the affected area of its surplus of blood. The blood is derivated and directed into channels removed from the seat of trouble. A congested liver can be depleted by thermic stimuli applied to the abdominal wall or the lower extremities. Hemorrhage in the lung or in the brain is most effectually handled by a derivating hydriatic procedure. These examples could be multiplied ad infinitum.

In all febrile conditions water in its numerous forms of application is the remedy par excellence. Aside from its anti-pyretic action, reducing the temperature, it supports and facilitates nature's attempts at intensified oxidation and accelerates tissue-change, namely, fever. Increase the function of the skin, unload

the congested organs within the organism, and you are bound to regenerate the body more rapidly and restore normal conditions more promptly. Stimulate cutaneous excretion and you necessarily encourage absorption within the organism. Water, therefore, is an ideal alterative. A complete pack from the feet to the neck given daily for a week has the same alterative effect as a febrile condition lasting four weeks would have.

In syphilis, chronic rheumatism, malaria, in all toxic or bacterial diseases, in all conditions characterized by sluggishness of blood supply and torpidity of function, in fact wherever and whenever we desire to modify the circulation, to intensify physiological combustion, to force absorption and alter nutrition, hydrotherapeutic measures are indicated. Clinically I could quote examples and illustrations without end. A typhoid fever patient in one of our suburbs had been lying in a comatose condition for over two weeks. The attending physician was a man of ability, who at the suggestion of the family asked me to meet him in consultation. I found the patient unconscious, eyes bloodshot, skin dry, respiration labored, pulse small and much accelerated, temperature 102°. We agreed to apply a complete pack to the patient to last at least half an hour. The doctor asked me to bear the responsibility, which I cheerfully volunteered to do. The pack was applied. Reaction was remarkably prompt and complete. I allowed the pack to remain for three quarters of an hour. Respiration was by that time easier, pulse stronger, and patient seemed to be sleeping quietly. After two hours consciousness returned. Recovery was rapid and complete. The packs were given regularly by a trained nurse for a week. The organism of that patient seemed to have been at a standstill, and I am sure that the patient would have died of auto-intoxication if the organism had not been shaken out of its lethargy by powerful stimulation of the skin. One good sweat set the machinery in motion, the derivating effect of the pack relieved the congested brain and consciousness returned.

Another case suffered uremic convulsions incessantly. Patient's condition seemed hopeless. Three months have elapsed. The patient is to-day as well as she ever was, there is not a trace

of albumen in the urine to-day. The result was accomplished by cold moist packs given daily for a month. I beg to add that neither patient was given any internal medication after the hy-driatic treatment was begun.

The subject is too vast and the time too short to justify a more thorough handling of the subject. The clinical uses of water are without end, both in variety and manner of application. There are, of course, contraindications in some cases. The physician must individualize, and, above all things, make as accurate a diagnosis as possible. Only then hydrotherapeutics becomes a valuable physiological method in his hands, a powerful agent for good in the sick-room. From my experience I am justified in saying that hydrotherapy is on the same level with dietetics and hygiene. If the practice of medicine is to ever become a science it will have to be developed along the lines indicated. How much our European brethren think of water is shown by the fact that three German universities have separate chairs of hydrotherapeutics. The subject certainly deserves more attention than it has received heretofore at the hands of scientific practitioners.

Prince Bismarck, who had been treated by the most famous medical men in Germany without receiving any benefit from their treatment, placed himself under the care of Dr. Schwenninger, who gave him no internal medicine but treated him hydrotherapeutically, dietetically, and hygienically. After Bismarck had been completely restored to health, some one asked him what he thought of water. He answered, "I cannot say that I like it much on the inside, but on the outside it is a d—— good thing." From what I know about water I am prepared to say, Amen.

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## FUNCTIONAL HEART AFFECTIONS.

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BY W. T. MARRS, M. D. PEORIA HEIGHTS, ILL.

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THE question often arises as to why neurotic affections of the heart are more common than formerly, and the answer is obviously to be found in the rapid transit pace at which we are

now moving. This does not necessarily imply that all neurotic men are to be found chasing dollars and delusions overtime, or that all the nervous women are those who are devoting themselves too assiduously to society. Perhaps the *attempt* on the part of many to ape and fashion themselves after the manner of those in higher life is a great factor in impairing health. The struggle to keep in the swim and to disport themselves like those better envired has its effect in time upon the cardio-vascular system. There are living in our large cities many thousands of families whose bread-winner may be only a common laborer or clerk, but they try to dress and live in keeping with the automobile class.

The factors concerned in the production of the neuroses to which functional heart affections belong are many and varied. Among them we may mention diet, alcohol, cigarettes, overwork, late hours, and insufficient sleep, heredity, etc. A functional heart disturbance may be variable in its degree of intensity, and may be very mild or may cause persistent and untold suffering. The more common manifestations are tachycardia, or an accelerated action of the heart; palpitation, disturbed rhythm, feebleness due to lack of muscular tone and sometimes a painful condition in the precordia over the heart. Another type in which there is irregular and exaggerated heart action is due to toxicity, the most common being from tobacco and cigarettes.

The following case may be of some little interest from a clinical standpoint, as it is in some measure typical of cases now frequently met. In May, 1906, a lady aged forty came to see me suffering from a rather aggravated heart affection. She was of swarthy complexion and decidedly of the so-called bilious temperament. This lady had frequent attacks of violent palpitation which were followed by periods of weakness amounting to prostration. During the latter the heart sounds were scarcely discernible on auscultation. The lady had been addicted to the excessive drinking of coffee, *always using it in the place of water*.

The physician who had treated the case before me had interdicted the use of coffee only for breakfast and had given digitalis and the bromides. She had, however, obtained only a modicum



of relief and her heart was still so irritable and weak as to make life uncomfortable and to preclude her mingling only in the society of a few quiet friends. On the whole she was in a pitiable condition. The inhibitory mechanism of the heart seemed irreparably damaged, but I could detect no evidences of an organic lesion. Hysteria was in this case clearly eliminated. I began treatment by admonishing the woman to refrain from active exertion for a short time and gave her a form of passive exercise instead. This was done by having her rubbed vigorously twice a day with towels of a coarse fiber which had been dipped in strong brine and dried. Calomel and salts were given to act upon the secretions and keep the bowels open. Cactina pillets were given to strengthen and tone the heart, one every four hours, and when there was much feebleness one was given for a time every two hours. This remedy acted very nicely in regulating the heart action and left no unpleasant after-effects. In a few days there was marked improvement and the lady was then instructed to begin taking exercise, increasing the amount a little each day; also to gradually subject herself to a moderate degree of excitement. This treatment worked well and was continued for three months, when there was complete restoration to health. At this date (August 15) no recurrence of the heart trouble has been reported.

Functional affections of the heart are very common and entail much suffering upon those so afflicted. The wrong remedies are too often chosen for these troubles. Digitalis is a remedy to slow the heart and favor compensation when there is a leaky valve. Strychnine is a tetanizing agent and should not be used where the heart is irritable. Glonoin is an excellent remedy to tide the heart over an acute attack of enfeebled action, but it is not a thing for continued use. It is simply an emergency drug. Cactina in the form of cactina pillets acts very kindly in all functional troubles and in progressive valvular insufficiency. It is especially serviceable in neurotic people who have a weak circulation as it gives tone to the heart and vascular system and may be given indefinitely without fear of producing untoward symptoms.

## *Abstracts.*

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### THE TREATMENT OF INOPERABLE MALIGNANT TUMORS — CARCINOMA.

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(Abstract of paper by J. M. G. Carter, M. D., Sc. D., Ph. D., Waukegan, Emeritus Professor of Clinical Medicine, University of Illinois; Fellow of the American Academy of Medicine; Ex-President of the Illinois State Medical Society, etc., etc., read before the Section on Medicine of the Illinois State Medical Society at Springfield, May 15 - 17, 1906, and published in the *Illinois Medical Journal*, January, 1907. The bibliography is omitted.)

I HAVE two reasons for presenting a discussion on the treatment of cancer at this time: First, the importance of the subject, and second, the hope that I have discovered a method which may result in saving many lives. It has been affirmed by Wutzdorff that there has been an increase in the number of cases of cancer in the last few years, and some, with Sir W. M. Banks, believe the increase is due to excessive meat eating. At any rate, it has been shown that many cases occur in robust and well-fed individuals, and especially in the comparatively young of both sexes. It often happens that the presence of such a growth is not suspected until it is too late for operative interference, because of the fact that the appearance of the patient does not indicate the progress of the disease (Nothnagel.) Many cases also occur which cannot be operated on because of the location, as when situated near vital organs or around important blood vessels. Then, again, there are patients who will not submit to an operation.

To the medical man has usually fallen the duty of caring for these classes of unfortunate cancer patients, and from time immemorial the professional mind has been taxed to discover some means of relief, some agent or remedy which might destroy the abnormal growth.

Lauder Brunton was the first to investigate the chemical com-

position of cell-nuclei, from which has been secured a compound called nuclein. This substance is an albuminoid and contains phosphorus. Nuclein is the most distinctive element of leucocytes, being the constituent by virtue of which the cell grows (E. R. Larned.) Vaughn and McClintock have demonstrated that the nuclein is the germicidal agent in blood plasma and is furnished by the polynuclear leucocytes.

The bromide of gold and arsenic is another remedy which, in my hands, has seemed to prove useful in the treatment of inoperable carcinoma; but I have always used it in connection with other agents. I have had more confidence in the nuclein than in the bromide, chiefly, perhaps, because I have had two cures in which I did not use the bromide, while I have had none where nuclein was not used. I have come to consider the administration of nuclein and the bromide of gold and arsenic together as a most rational and valuable treatment in cases of inoperable carcinoma. It is the combination upon which I depend rather than on either agent singly.

I have used this method of treatment in many cases with apparent benefit, but I am able to report only five cases in which the treatment was carried out as prescribed from the time the patient came under my observation until the termination of the case. One of the cases died. The other four recovered.\*

CASE I.—Mrs. S., aged 50. She had suffered no serious illness prior to the beginning of her present ailment, about one year before my first visit. Her first symptoms were indigestion, flatulence, heartburn, eructation of gas, and similar disturbances of the stomach. The symptoms had gradually grown worse until pain and vomiting had supervened some weeks before. She had lost flesh and grown weak. At the time of my first visit, the patient was lying on a couch, in pain, pale and cachectic. She had been vomiting and apparently had suffered much. The ejecta having been destroyed, no opportunity offered to analyze the vomited material at that time. The temperature was normal. Temporizing treatment was adopted and the patient was not seen again

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\* Only cases 1, 4, and 5 are cited here.

for a week. Then I was summoned hastily to see her and found her vomiting and in great pain. She had not been free from these symptoms since my former visit. This time, following my directions, the vomited material had been reserved for examination. The patient had not improved. The ejecta were typical and abundant and contained dark grumous material, mucus and remnants of food. The occurrences of vomiting were periodical. A distinct tumor could be outlined at or near the pylorus. The bowel evacuations also contained a dark material. Chemical examination showed increase of lactic and absence of hydrochloric acid. The microscope showed cell-nests and bacteria. *Diagnosis, carcinoma of the stomach.*

*Treatment.*—The local treatment consisted of the use, by mouth, of a 2 per cent. solution of *Hydrozone*. The patient was told to drink half a pint of this solution half an hour before meal time, lie on the back for five minutes, then turn on the right side and remain in that position for twenty-five minutes. This remedy was given for its antiseptic effect. The internal treatment was nuclein. The particular preparation was Reed and Carnrick's protonuclein. The dose was 24 grains a day. This time the patient was kept under observation for a month, until the symptoms were not quite so severe. The treatment was continued, however, and after several weeks I called to see the patient in another exacerbation of her symptoms; but this time they were not so severe. After a few days I dismissed her again, with advice to continue the nuclein, *but to omit the Hydrozone*. Some five months later I called to see the patient and found her at work about the house. The symptoms and tumor had disappeared and the cachectic look had given place to a more healthful appearance. I did not see her again, but three years later I was informed that she was well and had had no return of the old symptoms.

CASE 4.—Mrs. M. H., aged 38, mother of one child, six years old. She came to me in January, 1901. She was very nervous, somewhat cachectic, and suffered slight pain in the pelvis. She had slight, if any discharge, but was losing flesh. Digital examination revealed a hard enlargement on the anterior lip of the

cervix. The growth presented considerable resistance to the finger, but the uterus was freely movable. The use of the speculum showed a small cauliflower area at the edge of the hardness and a slight discharge. The diagnosis made was probable carcinoma of the cervix. The patient put herself under my immediate care, so that I could watch the case daily. The local treatment *adopted was spraying the cervix with full-strength Hydrozone*, and the daily use of astringent and sterile douches. Internally, nuclein was used in 24 grain doses daily. A nervine and nux vomica were added to control the patient's nervous or unstrung condition. After a month of this treatment, the symptoms did not seem to be so severe. From this time the patient began to improve. In three months from beginning the treatment the hardness of the tissues had disappeared, the cauliflower appearance was removed, and the pain and other symptoms had entirely subsided.

CASE 5.—Mr. M. L. E., aged 55 a teamster. He had been strong and well and usually free from any ailment except a diarrhea until about a year before I saw him. The first intimation he had of serious trouble was in March, 1904. At that time he had pain and diarrhea. A physician was called and discovered a tumor in the region of the sigmoid flexure. After recovery from the temporary illness, he sought advice concerning the tumor; and, although he visited several surgeons of note, no one seemed willing to remove the growth, and their opinions gave him no hope of final recovery and little expectation of temporary relief. Most of them refused to operate, saying that the tumor was probably cancer and he would be better off without an operation.

He came to me in January, 1905, and I found the following conditions and symptoms: He was cachectic, was losing flesh, and had a tumor in the region of the sigmoid about the size of a child's head, which was tender on pressure. He had sharp, cutting pains in the tumor, suffered from flatulence, and had a diarrhea with scybalous feces. He came to me because of my success with Case 2, of which he had heard. I advised an operation. He was willing to submit to one, but said that no one whom he

had visited would agree to do it except Dr. J. B. Murphy, who was willing to operate upon request, but could not advise it with any hope of success. He returned to Dr. Murphy and was operated upon about January 25th at Mercy Hospital. Upon opening the abdomen a tumor four or five inches in diameter was found at the sigmoid flexure. The infiltration into the adjacent structures and the adhesions were so extensive that removal was out of the question. The diagnosis was carcinoma of the sigmoid. The wound was closed and the patient returned to bed.

About the 20th of February he came to me again, and on February 22, 1905, I began medical treatment. I advised him to return to bed, which he did, and remained in bed for eight weeks after the treatment was commenced. The treatment was bromide of gold and arsenic, 45 drops, and nuclein, 36 grains, daily. By the 1st of May, his pain had ceased, the tenderness had diminished, and the tumor had ceased to grow. By the 1st of July it was plain that the tumor was slightly smaller. He was permitted to return home on September 1. About the middle of October he came again to my office. The tumor had entirely disappeared and all symptoms had subsided, including the diarrhea. Dr. Murphy saw the patient soon after and confirmed my statement that the tumor had disappeared. A letter from the patient last month states that there has been no return of any of the symptoms — seven months after he was pronounced cured. He is in better health than for many years.

January, 1907, one and one half years after the cure was completed, he is in splendid health.

In presenting the foregoing cases, the author does not suggest that he has found an infallible cure for cancer, but rather that such results must convince us that cancer may be placed on the list of curable diseases. The treatment, to be successful, requires great care in carrying out the method. If the remedies are carelessly administered, satisfactory results cannot be expected. In all serious cases and internal tumors, I advise remaining in bed for weeks, depending upon conditions in individual instances. The bromide (*i. e.*, the Arsenaurol) must be gradually increased. Few patients will bear large doses from the beginning.

PYRENOL.

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DR. M. STEINER writes from the Ducal Hospital and Sanitarium at Altenburg (Director, Privy Councillor Nuetzenadel) that a remedy for influenza must meet three requirements: (1) It must effect subjective improvement, *i. e.*, depress temperature and relieve pains; (2) it must be innocuous; and (3) it must as far as possible prevent complications. He applies these tests to pyrenol (benzoyl-thymyl-sodium-benzoyl-oxy-benzoate), which has lately been recommended for influenza in about thirty publications.

That pyrenol is antipyretic and analgesic must be conceded. Thus reports from the Augusta Hospital in Berlin and the General Hospital in Vienna show that its antithermic effect is slow and steady, accompanied by subjective betterment; there is no exhausting diaphoresis under its use, as there is with antipyretics which act suddenly and rapidly.

As to innocuousness, hardly a single writer fails to record the improvement in the appetite and the general absence of gastrointestinal disturbances under its use. The sphygmometric experiments of Cowl showed total absence of an untoward action: to the contrary, the drug is a cardiotonic, a most valuable property in influenza. Nor does pyrenol ever irritate the kidneys.

Steiner's own observations with pyrenol began in 1903, were especially numerous in the epidemic of 1904-05, and were confirmed in the autumns of 1905 and 1906. He has records of eighty-six cases treated with pyrenol, and twenty control cases which got other treatment.

Cases in the prodromal stage of influenza took 15 grains pyrenol thrice daily or 7 1-2 grains six times daily; when the patient could not swallow tablets, 5 per cent. solution was given. If symptoms were already well developed and severe, the dose was 15 grains four times daily or half the dose every three hours, given until the first signs of improvement occurred and then reduced to 45 grains daily, and continued till he got out of bed. Cardiac lesions, nephritis, or liver trouble were no contraindications.

The third test of pyrenol is the absence of complications. Of the patients seen in the prodromal stage the great majority remained under treatment only for from a few days to a week; and not one developed pneumonia. In almost all pyrenol was the only treatment required. In the first two days large hot compresses were applied for two hours twice daily to the trunk to promote diaphoresis, and pyrenol seemed to do especially well under this treatment. Vigorous rubbing of the body after the sweating seemed to put the patient in good condition for some hours.

Of the patients seen only when the malady was already advanced, pneumonia was positively diagnosed in eight. The dose of pyrenol was usually increased by 15 grains daily, to control fever and pain more rapidly. There was not a single death. As temperature and pulse were kept in moderate bounds, the subjective symptoms were bearable and the course of the disease was very favorably modified. Cough during the febrile stage was treated exclusively with pyrenol.

Pyrenol was very helpful in the influenza of children. In young subjects almost all antipyretics, even in small doses, are apt to depress the temperature to subnormal, with collapse lasting perhaps for hours; so we are glad to have a remedy which slowly and gradually lessens the fever and does not depress the heart. Children from six months to eight years got, in accordance with age, one or two teaspoonfuls of a two to four per cent. pyrenol solution in raspberry syrup, three or four times a day. Its antifebrile action lasted longer in children than in adults, so less frequent administrations were necessary.

To conclude: Pyrenol in influenza depresses the fever gently and gradually, with very light sweating and an increase in the general well-being. It relieves the pains in the joints, muscles, tendons, and fasciæ, as well as those of the pleural and intercostal nerves. It is a powerful expectorant, loosening the mucus and diminishing secretion.

In the *Berliner klin. Wochenschr.*, Feb. 11, 1907, Dr. Braeunig refers to Steiner's paper and adds that it tells nothing new, for the beneficial effect of pyrenol in influenza and pertussis is



Well known. Braeunig also found it to do good service in these cases, as well as in the hectic fever of phthisis, in which, given at the right time, it forestalls the high evening temperatures without causing the annoying diaphoresis which follows other antipyretics.

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## TRANSMISSIBILITY AND CURABILITY OF CANCER.

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DR. WILLIAM SEAMAN BAINBRIDGE of New York City, in the *Boston Med. and Surg. Jour.* of Jan. 29, 1907, calls attention to the growing fear of cancer on the part of people of all classes. He attributes this to the theories of heredity, congenital transmission, and infectiousness or contagiousness as causal factors in the production of the disease. The fear of the contagiousness of cancer has been aroused by the exploitation of the subject in the public press. After reviewing the evidence *pro* and *con* of these theories he calls attention to the following points, adduced from the mass of conflicting evidence, which, pending the solution of the "cancer problem," will lead no one into danger:—

(1) That the hereditary and congenital acquirement of cancer are subjects which require much more study before any definite conclusions can be formulated concerning them. (2) That in the light of our present knowledge they hold no special element of alarm. (3) That the contagiousness or infectiousness of cancer is far from proved. (4) That evidence to support the theory of contagion or infection is so incomplete and inconclusive that the public need not concern itself with it. (5) That the public need merely be instructed to apply the same precautionary measures as should be brought to bear in the care of any ulcer or open wound. (6) That the danger of the accidental acquirement of cancer is far less than from typhoid fever, syphilis, or tuberculosis. (7) That in the care of cancer cases there is much more danger to the attendant of septic infection, of blood poisoning from pus organisms, than from any possible acquirement of cancer. (8) That the communication of cancer from man to man is so rare, if it really occurs at all, that it can

practically be disregarded. (9) That in cancer, as in all other disease, attention to diet, exercise, and proper hygienic surroundings, is of the utmost importance. (10) That cancer is local in its beginning. (11) That, when accessible, it may, in its incipency, be removed by radical operation so perfectly that the chances are overwhelmingly in favor of its non-recurrence. (12) That once it has advanced beyond the stage of cure, in many cases suffering may be palliated and life prolonged by surgical means. (13) That while other methods of treatment may, in some cases, offer hope for the cancer victim, the evidence is conclusive that surgery; for operable cases, affords the surest means of cure.

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### HEMORRHOIDS AND CONSTIPATION.

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IN a paper on "The Medicinal Treatment of Hemorrhoids without Surgical Intervention" (*Therapeutic Medicine*, January, 1907), Dr. M. R. Dinkelspiel says that he regards non-operative treatment indicated in incipient forms, when the hemorrhoids are secondary to other disease, as hepatic cirrhosis, tumors, etc., and when the hemorrhoids occur in aged individuals who cannot safely undergo operation.

Constipation is a most potent cause; and it must be cured, the defecations being so arranged that they occur at night, as the subsequent rest relieves engorgement.

Locally, cleanliness is of primary importance; the parts should be washed with witch hazel solution, of which one or two ounces may also be injected into the rectum. Of late he uses the bismuth iodoresorcin-sulphonate suppositories (anusol), which relieve the congestion and inflammation and liquify the feces. When there also exists external inflammation, he slightly warms a suppository and gently anoints the parts. Under this treatment he has seen many cases recover without recurrence.

Dr. Fred C. Thum, formerly Demonstrator of Anatomy at the Kentucky University, Louisville, writes on "Subacute Alcoholic Hepatitis," a form intermediate between the acute hepatitis from a single protracted spree and the chronic hepatitis from long

years of alcoholic excess. Calomel, podophyllin, etc., are not of very great use. Strikingly effective are pills consisting of salicylic acid, acid sodium oleate, phenol-phthalein, and menthol (probilin). They increase biliary secretion and render the bile sterile, thus inhibiting the inflammation in the hepatic structures. —Abstracted from *Medical Progress*, February, 1907.

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### Correspondence.

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San Diego, Cal., Sept. 15, 1907.

*Dear Doctor Roberts:* I suppose you have noticed, lately, that electricity is being used as an *anesthetic*; and to remind you of what you have often observed: how *near* a stupid fellow may stumble onto a valuable idea and not realize or discover his opportunity, I beg to relate the following:—

During 1872, I located at Cloverdale, Cal., to practice medicine and surgery. It was in the midst of quicksilver mines and reduction works, and many patients came to me who were suffering greatly from poisoning by inhaling the fumes at said reduction works. Many of these patients, before coming to me, had already been dosed with opiates, by mouth or needle, by doctors or otherwise; but found no relief therefrom.

In those days I was experimenting with electricity in several of its forms for various clinical purposes. One was weak, continuous galvanic currents to relieve various kinds of pain; hence the idea quickly came to me to relieve the pain of those poisoned patient's heads with weak continuous currents of galvanism, and, to my delight, they were thus quickly relieved. Furthermore, they quickly fell *asleep*, sitting in the chair. Of course I was delighted, and had never heard of the like before, although I had studied several works on clinical electricity. But, as said patients had *lost* much sleep by their pain, I reasoned that the electricity caused the sleep by easing the pain, and sleep came as a secondary product (as chemists say), and not as a direct effect of electricity. As said explanation was so simple and plausible, I looked or reasoned no further, and thus stopped short of fame.

In those days I published, in some of the medical journals, the aforesaid doings and results; but being a remote, obscure, private country practitioner, no man heeded my feeble voice, "as one crying in the wilderness." The electricity was applied, both moist sponge electrodes to the head, one, two, or three cell strength, galvanic battery, just as I had often used it to relieve many forms of pain, in many patients, before and since.

With best wishes, yours fraternally,

Q. C. SMITH, M. D.

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## *Records, Recollections and Reminiscences.*

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### TREATMENT OF PRISONERS OF WAR; THE PERCENTAGE OF DEATHS—NORTH AND SOUTH.

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BY SAMUEL E. LEWIS, M. D., LATE ASST. SURGEON, P. A. C. S., OF  
WASHINGTON, D. C.

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WE have been told that in round numbers the Confederate prisoners in Federal hands during the war amounted to 220,000, while the Federal prisoners in Confederate hands amounted to 270,000; that out of the 270,000 Federals in Confederate hands 22,000 died, while of the 220,000 Confederates in Federal hands over 20,000 died. The ratio being that more than 12 per cent. of the Confederates in Federal hands died; and less than 9 per cent. of the Federals in Confederate hands died.

This remarkable statement has been made by many distinguished writers and speakers, and has now become embodied in Southern literature.

Is it true? This question will be often asked in the future.

The statement has been confidently based upon a certain report said to have been made by Surgeon-General Joseph K. Barnes of the U. S. Army. But the Surgeon-General's office at Washington denies that any such report was made.

Failure to produce this report would compel acceptance of a

report made by the Secretary of War, Edwin M. Stanton, July 19, 1866, which differs from the report said to have been made by Surgeon-General Barnes only as to the number of Federal prisoners in Confederate hands; Stanton stating the number to have been 126,940. On the basis of Secretary Stanton's report, the ratio would be in round figures that 12 per cent. of Confederate prisoners died in the North, and nearly 18 per cent. of Federal prisoners died in the South.

Failure to produce the report of Surgeon-General Barnes referred to would compel our writers and speakers to recede from their statements heretofore made, or produce other evidence in verification of the figures used by them.

Being impressed with this view, the writer undertook to find this report of Surgeon-General Barnes.

On application to the Surgeon-General's Office, Washington, D. C., he was astonished at being told that said Office had no knowledge of any such report having been made by Surgeon-General Barnes; furthermore that he (Surgeon-General Barnes) was not in the position to acquire the information that would enable him to make such a report. The library of the War Department, the Army Medical Museum, the Library of Congress, the Document rooms of the U. S. Senate and House of Representatives and the Government Printing Office, were diligently searched for the report, without success.

In the endeavor to trace the statement regarding the report there was found mention of it by Vice-President A. H. Stephens, Hon. Benjamin H. Hill, President Jefferson Davis, Senator William B. Bate, and many other distinguished persons. But the statement, so far as has been learned, seems to have had its foundation in the *National Intelligencer* of Washington, D. C., one of the most trustworthy newspapers of that war-time period; and to have been deemed of sufficient importance and reliability by Vice-President A. H. Stephens to warrant incorporation in the pages of his great work, "The War between the States." It seems to be apparent that subsequent writers and speakers have accepted and used the statement quoted by Mr. Stephens as being beyond question.

The editorial mention in the *National Intelligencer* referred to by Mr. Stephens was found in the issue of June 2, 1869, page 2, first column; and is in exact conformity with the reference in the "War between the States."

The existence of this report is most unfortunately involved in mystery exceedingly difficult if not impossible to remove. No one will presume to question the sincerity and probity of Mr. Stephens in making the statement now so well known, nor the sincere belief of the other prominent Southern gentlemen who have followed him.

Nor should aspersion be cast upon the officers of the U. S. Government. Further search may bring to light some report of Dr. Barnes which may meet the case — lost or mislaid perhaps in the multiplicity of affairs, amid the confusion of the period so lately following a great internecine struggle, when there was lack of the more perfect clerical methods which prevail to-day. It is strange indeed that there appears to have been made no serious effort by the Republican members in refutation of Mr. Hill when he quoted it in the House of Representatives in 1876. And with no intention of reflecting on Dr. Joseph Jones it is also strange that he makes no mention of either the report of Mr. Stanton or that of Dr. Barnes in his most valuable report as Surgeon-General of the United Confederate Veterans in 1892.

Having endeavored to make a frank and plain statement of the mystery surrounding the report said to have been made by Surgeon-General Barnes and in its absence, the writer will attempt to show that the number of Federal prisoners in the hands of the Confederate authorities must have been substantially as is said to have been stated in that report, and submits the following facts as to the disposition of Federal prisoners of war held in Confederate prisons:—

1. In Report No. 45, House of Representatives, Fortieth Congress, third session (commonly known as Shank's Report), July 10, 1867 to February 6, 1869, pages 742 to 755, is to be found a detailed statement showing the number of Federal prisoners of war exchanged, illegally paroled, escaped, recaptured, and enlisted in the Confederate service during the war, 1861 - 1865, as

shown by records of Federal prisoners of war filed in the Adjutant-General's Office, at Washington, amounting in the aggregate to 161,817.

2. In the same volume, page 757, is to be found a detailed statement of Federal prisoners of war who died in the hands of the Confederate authorities during the war, 1861 - 1865, amounting in the aggregate to 26,328.

The two classes mentioned aggregate 188,145, being less than the 270,000 given in the Barnes' Report by 81,855.

It is reasonable to suppose that the large number of Federal prisoners remaining in the hands of the Confederate authorities would be sufficient to supply the deficiency. Accordingly the War Department was requested in writing to aid in ascertaining, if possible, the number of Union soldiers held in Confederate prisons, who were released at the end of the war. The reply was that "Because of the total absence of returns of Union soldiers in the hands of the Confederates during the last few months of the war, it is impossible to determine the number of Union soldiers, held in Confederate prisons, who were released at the close of the war."

It then seemed that no further progress could be made in clearing up the matter, when there appeared "The Public Life and Correspondence of James M. Mason, Confederate States Commissioner to England." In a letter therein addressed to A. Coolidge, Esq., Boston, Mass., January 25, 1865, Mr. Mason writes, "At last accounts there were sixty thousand of your countrymen prisoners of war in the Confederate States, and remaining there solely because of the refusal of your government to take them back."

Thus to the number already obtained it is warrantable to add 60,000 more, making an increase of the number to 248,145. Still there remain 21,855 to be accounted for to meet the figures in the report of Surgeon-General Barnes.

It is to be noted that the accounts referred to by Mr. Mason must have been made up some considerable time, perhaps months, before the writing to Mr. Coolidge. In the meantime there was great activity in both armies, and many engagements, so that be-

fore the surrender the number of Federal prisoners in the hands of the Confederate authorities must have been greatly in excess of that stated by Mr. Mason — greater than the 21,855 necessary to bring the figures in accord with the report of Surgeon-General Barnes.

To recapitulate, these appear as follows:—

The number under statement No. 1.....	161,817
The number under statement No. 2.....	26,328
The number estimated as remaining on hand at the end of the war .....	81,855
	<hr/>
	270,000

which sum agrees with that of Dr. Barnes' Report.

It would therefore seem to be clear that even though the report said to have been made by Surgeon-General Barnes may never be found, there is abundant evidence, as above given, that "the Confederates captured of Union soldiers, and held in Southern prisons, in round numbers, 270,000 men."

And therefore is the historical statement made by Mr. Stephens sustained, even without the presence of the mislaid or lost report of Surgeon-General Joseph K. Barnes.

Accompanying this paper there is submitted the following Exhibits:—

1. Report of Secretary of War Edwin M. Stanton, July 19, 1866.
2. Editorial from the *National Intelligencer*, June 2, 1869.
3. Extract from the "War Between the States," 1870.
4. Extract from the Amnesty Speech of the Honorable Benjamin H. Hill, January 11, 1876.
5. Extract from the "Rise and Fall of the Confederate Government."
6. Detailed Statement, from Report No. 45 H. R., 40th Congress, 3rd Session, as to exchanges, etc.
7. Detailed Statement, from the same volume, as to deaths.
8. Correspondence with the Military Secretary.
9. Extract from *The Southern Practitioner*.



*Exhibit No. 1.*

## WAR DEPARTMENT.

Washington City, July 19, 1866.

SIR: In compliance with a resolution of the House of Representatives, dated July 12, directing the Secretary of War to report the number of Union and rebel soldiers who died while held as prisoners of war, I have the honor to state that it appears by a report of the Commissary-General of Prisoners:—

1. That twenty-six thousand four hundred and thirty-six (26,436) deaths of rebel prisoners of war are reported.

2. That twenty-two thousand five hundred and seventy-six (22,576) Union soldiers are reported as having died in Southern prisons.

The reports also show that two hundred and twenty thousand (220,000) rebel prisoners were held in the North, and about one hundred and twenty-six thousand nine hundred and forty (126,940) Union prisoners in the South.

Your obedient servant,

EDWIN M. STANTON, *Secretary of War.*

Hon Schuyler Colfax, Speaker of the House of Representatives.

*Exhibit No. 2.*

*Editorial from the National Intelligencer, June 2, 1869, p. 2, col. 1.*

“ MORE FALSEHOOD UPON SYSTEM.”

“ ‘ On Monday next the committee of the Union War Prisoners’ Association will have an interview with the President concerning the proposed erection of a grand national monument to the memory of the 35,000 prisoners who died in Southern prisons during the war. The Association contemplates asking from Congress the grant of a public square on Pennsylvania Avenue, on which to erect the proposed monument.’

“ Such is the extract we cull from a Radical sheet. Here is the exciting falsehood that thirty-five thousand prisoners died in ‘ Southern prisons during the war.’ What is the official evidence that we have, as laid before the country, of a fact that we now assert? It is this: Surgeon-General Barnes, of the United

States army and war Office, year before last, made a full report on this subject, showing these startling statistics: that, from first to last, during the war, the Confederates captured of Union soldiers, and held in Southern prisons, in round numbers 270,000 men; and that the Unionists captured of Confederate soldiers, and held in Northern prisons in round numbers, 220,000 men. Yet, that there died in Northern prisons, in round numbers, 28,000 Southern soldiers, and in Southern prisons, in round numbers, 22,000.

“Although the Confederates captured and held fifty thousand more men than the Union armies captured and held, yet, in Northern prisons, six thousand more men died from alleged ill-usage, exposure, and deprivation, than died from the same causes in Southern prisons. It is a striking fact in this regard, that the average percentage of mortality in Northern prisons was greater, because Southern prisoners were mostly taken toward the close of the war, and were therefore the shortest time in confinement. But who is there now in the land that does not know, if General Butler is to be believed, that General Grant and Edwin Stanton are directly personally responsible in large part, for the deaths of Union men in Southern prisons, and particularly for most of the suffering and harrowing misery at Andersonville?

“General Butler has stated on the floor of Congress, in view of all and every official responsibility attaching to his position as a Representative, as well as in view of every responsibility attaching to his assertion as a man, that after he had arranged with the Confederate authorities for the exchange of the Union prisoners upon the fairest — indeed, upon the most exacting Union terms — the whole arrangement was defeated by the direct interposition of General Grant and Mr. Stanton, upon the ground that ‘the exchange would give to General Lee thirty thousand fresh troops,’ which, it is plain, they thought would hazard the safety of Grant’s army upon the Petersburg line, as indeed it would have done, though not probably with much prospect of ultimate success. Yet the best military officers of the South only desired, so they say, one additional full army corps at the back of Lee to have cut in two Grant’s great army, and thus prolonged the war indefinitely.

" We thus cut the head of this systematic Radical Hydra off again, as we have repeatedly done heretofore.

" In connection with the well known fact of the cold-blooded neglect of Secretary Stanton and General Grant to send vessels to carry off Andersonville prisoners, as desired by the rebel authorities, without stipulation of any sort as to exchange, and their refusal, also, to provide medicines for them, as also asked by General Ould at Richmond, it must be borne in mind that a resolution which was introduced in Congress to ascertain officially as to facts of deprivation and suffering by rebels in Northern prisons was deliberately voted down.

" We would simply say to the rancorous and revengeful element of politicians that infest the Executive presence, and promise to raise monuments, and do one and several other things to prolong the hates of the war, provided that they can get office, that a vast number of the very best men in the Republican party are disgusted at their efforts to tear open the wounds that come of civil war. They say, ' Let us have peace.' "

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" I hereby certify that this is a true copy of the editorial in the *National Intelligencer* of June 2, 1869, page 2, column 1.

" G. T. RITCHIE, *Librarian of Congress*.

" Sept. 6, 1904.

( Notarial )      " Subscribed and sworn to before me this 6th  
( Seal )              day of September, 1904.

" HENRY E. TRIPP, *Notary Public, D. C.*"

*Exhibit No. 3.*

Extract from " War Between the States," by Vice-President Alexander H. Stephens, 1870, Vol. 2, pp. 507, 508.

" The report of Mr. Stanton as Secretary of War on the 19th July, 1866, exhibits the fact that of the Federal prisoners in Confederate hands during the war only 22,576 died ; while of the Confederate prisoners in Federal hands 26,436 died. This report does not set forth the exact number of prisoners held by each side respectively. These facts were given more in detail in a subsequent report by Surgeon-General Barnes of the United

States Army. His report I have not seen, but according to a statement editorially in the *National Intelligencer* — very high authority — it appears from the Surgeon-General's Report that the whole number of Federal prisoners captured by the Confederates and held in Southern prisons, from first to last during the war was, in round numbers, 270,000; while the whole number of Confederates captured and held in prisons by the Federals was, in like round numbers, only 220,000. From these two reports it appears that with 50,000 more prisoners in Southern stockades, or other modes of confinement, the deaths were nearly 4,000 less! According to these figures the percentum of Federal deaths in Southern prisons was *under nine*; while the percentum of Confederate deaths in Northern prisons was *over twelve!*"

*Exhibit No. 4*

Extract from the Honorable Benjamin H. Hill's Amnesty Speech in the House of Representatives, January 11, 1876.

From the Congressional Record, page 348.

"Now I call the attention of gentlemen to this fact, that the report of Mr. Stanton, the Secretary of War — you will believe him, will you not? — on the 19th of July, 1866 — send to the Library and get it — exhibits the fact that of the Federal prisoners in Confederate hands during the war 22,576 died, while of the Confederate prisoners in Federal hands 26,436 died.

"And Surgeon-General Barnes reports in an official report — I suppose you will believe him — that in round numbers the Confederate prisoners in Federal hands amounted to 220,000, while the Federal prisoners in Confederate hands amounted to 270,000. Out of the 270,000 in Confederate hands 22,000 died, while of the 220,000 Confederates in Federal hands over 26,000 died. The ratio is this: More than twelve per cent. of the Confederates in Federal hands died, and less than nine per cent. of the Federals in Confederate hands died. What is the logic of these facts according to the gentleman from Maine?" etc., etc.

*Exhibit No. 5.*

Extract from Mr. Davis's second volume of the "Rise and Fall of the Confederate Government," 1881, p. 607.

“ Finally, to the bold allegations of ill-treatment of prisoners on our side, and humane treatment and adequate supplies on that of our opponents, it is only necessary to offer two facts:—

“ First, the report of the Secretary of War, E. M. Stanton, made on July 19, 1866, shows that of all the prisoners in our hands during the war, only 22,576 died; while of the prisoners in our opponent's hands 26,436 died.

“ Second, the official report of Surgeon-General Barnes, an officer of the United States Government, states that, in round numbers, the number of Confederate States prisoners in their hands amounted to 220,000; the number of United States prisoners in our hands amounted to 270,000.

“ Thus, out of the 270,000 in our hands, 22,000 died; while of the 220,000 of our soldiers in their hands, 26,000 died. Thus more than twelve per cent. of the prisoners in our opponent's hands died, and less than nine per cent. of the prisoners in our hands died.”

*Exhibit No. 6.*

Disposition of Federal prisoners of war held in Confederate Prisons.

Copy from Treatment Prisoners of War by Rebel Authorities, Report No. 45, Ho. Reps., 40th Cong., 3rd Sess., pages 742 to 755 (Shanks' Report, July 10, 1867, to Feby. 6, 1869. Pub. Govt. Printg. Off., 1869).

“ Detailed statement showing the number of Federal prisoners of war exchanged, illegally paroled, escaped, recaptured, and enlisted in Confederate service during the rebellion of 1861 - 65, as shown by records of Federal prisoners of war filed in the Adjutant-General's Office, of Washington, D. C.”

*Legally paroled and exchanged.*—White: Officers, 6,444; enlisted men, 146,103; citizens, 1,547; total, 154,094. Colored: Officers, 35; enlisted men, 201; citizens, none; total, 236.

*Illegally paroled.*—White: Officers, 59; enlisted men, 821; citizens, 217; total, 1,097. Colored: Officers, 46; enlisted men, none; citizens, none; total, 46.

The details are omitted here, the classifications and totals only being given, as necessary for the present elucidation.

*Escaped.*— White: Officers, 394; enlisted men, 2,273; citizens, 29; total, 2,696. Colored: Officers, 3; enlisted men, 74; citizens, none; total, 77.

*Recaptured.*— White: Officers, none; enlisted men, 17; citizens, none; total, 17. Colored: Officers, none, enlisted men, 384; citizens, none; total, 384.

*Enlisted in Confederate service.*— White: Officers, none; enlisted men, 3,161; citizens, 9; total, 3,170. Colored: Officers, none, enlisted men, none; citizens, none; total, nothing.

*Aggregate.*

Officers .....	6,981
Enlisted men .....	153,034
Citizens .....	1,802
<hr/>	
Grand total .....	161,817

*Exhibit No. 7.*

Detailed Statement of Federal Prisoners of War Who Died in the Hands of the Confederate Authorities during the Rebellion, 1861 - 1865, with the Name and Locality of Prisons, Names of Commanding Officers of the Same, the Cause of the Death, and the Number of Graves Marked and Known, and the Number Marked Unknown, p. 757, Shanks' Report.

(Details omitted.)

*Deaths.*— White: Officers, 110; enlisted men, 25,979; citizens, 100; total, 26,240. Colored: Officers, 1; enlisted men, 78; citizens, none; total, 79. Grand total, 26,328.

*Exhibit No. 8.*

Headquarters Rouss Camp, No. 1191, U. C. V.  
1418 14th St., N.W., Washington, D. C., May 30, 1905.

General F. C. Ainsworth, Military Secretary.

GENERAL: For historical purposes I respectfully request the aid of your Department in ascertaining, if possible, the number of Union soldiers held in Confederate prisons, which were released at the end of the war.

I would not unnecessarily trouble you with the matter, but I have made diligent search elsewhere without avail.

I have the honor to be, Your obedient servant,

(Signed) SAMUEL E. LEWIS, M. D., *Commander.*

*First Endorsement.*

File with R & P 184934 U.

Military Secretary's Office, May 31, 1905, 1019563, War Department.

Washington, D. C., May 30, 1905.

Samuel E. Lewis, M. D., desires to ascertain if possible the number of Union soldiers held in Confederate prisons, which were released at the end of the war.

*Second Endorsement.*

War Department, the Military Secretary's Office.

Washington, D. C., May 31, 1905.

*Respectfully returned to Samuel E. Lewis, M. D.,*

1418 14th Street, N.W., Washington, D. C.

Because of the total absence of returns of Union soldiers in the hands of the Confederates during the last few months of the civil war, it is impossible to determine the number of Union soldiers held in Confederate prisons who were released at the close of that war.

per M.

F. C. AINSWORTH, *Military Secretary.*

*Exhibit No. 9.*

Extract from *Southern Practitioner*, Nashville, Tennessee, June, 1905, p. 330.

"Treatment of Prisoners during the War Between the States," by C. H. Tebault, M. D., Surgeon-General U. C. V., New Orleans, La. Letter of James H. Mason, Confederate States Commissioner to England (from "The Public Life and Correspondence" by his daughter, 1903), thus:—

"And thus it has resulted that, at last accounts, there were some sixty thousand (60,000) of your countrymen prisoners of war in the Confederate states, and remaining there solely because of the refusal of your government to take them back."

The letter was addressed to A. Coolidge, Esq., Boston, Mass., January 25, 1865, and was in answer to a letter from Mr. Coolidge, dated Boston, December 15, 1864.

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### *Obituary.*

DR. MICHAEL M. BESHOR, pioneer, prominent as founder of the Pueblo Chieftain and Trinidad Advertiser, died at his residence in Trinidad, Colo., on the night of September 5, at the age of 74. Born in Pennsylvania, graduated from Ann Arbor University in 1853, last survivor of his class, he was a surgeon in the Confederate Army, and a member of the Association of Medical Officers of the Army and Navy of the Confederacy.

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### *Editorial.*

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#### FIGHTING TUBERCULOSIS.

If a new disease claiming its victims by the tens of thousands annually and from which no community is immune were to appear in any neighborhood it would almost create a panic, and all possible or known precautions against it would be employed. Yet such a disease exists all the time and nearly everywhere. Unrestrained it is fatal in nearly every case, and more than 100,000 die from it every year. But it is an old disease, the people have become accustomed to it, and accept it somewhat as the Orientals accept as fate the disease that destroys them by thousands. The victim of tuberculosis is in thousands of homes, and many more thousands of fond hearts are distressed by the shadow that hovers over the home, unrelieved by a ray of hope. Medical and sanitary science is fighting this terrible enemy of the human race which annually destroys more lives than were lost in any year of the Civil War, and more than were killed on the field in the entire four years' war. In this battle against the white plague every State, every county, and every municipality should render every possible aid. But all such efforts will largely fail unless they have the co-operation of citizens—the people for whose protection the war is waged. The Health Department of New York City, which is making vigorous war against it, has issued the following instruction card:—



To avoid consumption:—

“Don't live, study, or sleep in rooms where there is no fresh air.

Don't live in dusty air. Get rid of dust by mopping with damp cloths.

Don't sweep with a dry broom.

Keep one window partly open in your bed-room at night and air the room two or three times a day.

Don't eat with soiled hands. Wash them first.

Don't put hands or pencils in mouth or any candy or chewing gum other persons have used.

Don't keep soiled handkerchiefs in your pocket.

Take a warm bath at least once a week.

To those who have contracted consumption:—

Don't waste your money on patent medicines. If you go to a doctor in time you can be cured.

Don't drink whisky or any other form of liquor.

Don't sleep in the same bed with any one else, and, if possible, not in the same room.

Good food, fresh air, and rest are the best cures. Keep in the sunlight as much as possible.

Keep your windows open winter and summer, day and night.

The careful and clean consumptive is not dangerous to those with whom he lives and works.

The following rules are enjoined on even healthy persons, and they are asked to observe them:—

Don't spit on sidewalks, floors, or hallways. Spit into the gutters or a spittoon half filled with water.

Don't cough or sneeze without holding a handkerchief or your hand over your mouth or nose.”

These rules are not offered as a cure for tuberculosis. They are merely precautionary and remedial. The trouble is, it is difficult to induce people to observe them. In such matters grown persons are very much like children. Unless forced to obey rules, they will ignore warnings until it is too late. Ignorance, indifference, unwise selfishness, disregard of common sense rules, and contempt for that which they do not understand, or the reason and logic of which they do not comprehend, make the work of precaution and prevention very difficult. But there are enough intelligent people who appreciate the need and value of such measures to gradually, through their influence, inculcate habits of cleanliness and hygienic precaution that may eventually become fixed. The observance of rules which promote cleanliness of person and premises, streets and cities, temperance, the use of pure water, fresh air, wholesome food, sensible clothing, outdoor exercise, and the like, will contribute to a generally healthy and healthful condition of person and place.

In our last number (September) we called attention to the duty of

the State in the battle against this terrible disease. The very simple but rational suggestions of the New York Health Department will do much toward fortifying the human economy against the attacks of the bacilli, but by State aid we can best limit the amount of said attacks.

It is only within the last two decades that sufficient data and observations have accumulated to warrant the definite conclusions that are now accepted as incontrovertible. These particular organisms that are essential in the propagation of tuberculosis are among those that, except in the laboratory, grow only in the human body or in the bodies of some animals. These pathogenic germs rarely increase outside the living bodies of men and some animals, and under certain circumstances rapidly perish or become inert. Ordinarily tuberculosis rarely extends except by the direct transference of fresh infective material secretions. They are transmitted in nearly every instance almost directly from the infected individual to the healthy person of relative, friend, or "stranger within our gates."

With the rules as above laid down we to a great extent fortify our bodies against the invasion of the enemy; and with proper care of the infected individuals we lessen to a great extent the number of the invaders. The latter can be in best manner secured by State aid, assisted by local and municipal assistance; the National Government can also add greatly to the effectiveness of action by the States.

We have not often indulged in politico-economic suggestions in this journal, and regardless of who has advocated or who has opposed such national legislation looking toward "An Income Tax," we would give our most hearty support to a well devised measure of this kind, the proceeds obtained by the National Government in each particular State to be devoted by each State to the establishment and support of State Sanatoria for the cure of tuberculosis. That tuberculosis is curable has been demonstrated; and that regardless of locality, the best results have been obtained, that is, the most generally and uniformly successful results have been secured, in properly equipped sanatoria.

Each State can devote some of its revenues to so important a line of work, so conducive to the welfare and prosperity of all its citizens, and those who have large incomes can be taxed by the general government for no more appropriate measures than this. We are all alike subject to the onslaught of this particular enemy to the race, and in proportion to our financial abilities can well afford to render ourselves and our families less liable to attack.

In conclusion, we sincerely hope that the day is not far distant, when, with individual effort, aided properly by National, State, county, and municipal enactment and rationally devised measures, that this so terrible a foe is relegated to the past. **IT CAN BE DONE!** Shall we now commence our attack along all lines, or shall we wait for those who come after us? Now is the time. **DO IT NOW!**

**NOSE AND THROAT.**—For use in nose, mouth, and throat an antiseptic must combine strong germicidal power with absolute non-toxicity. Tyree's Antiseptic Powder fulfils these requirements. It may be used with complete safety as a mouth wash and for spraying the nose and throat. Its power to destroy bacteria that infest these passages is shown in its action in retarding dental cavities and the destruction of the bacillus acidilactici. As was to be expected, Tyree's Antiseptic Powder has imitations. Only worthless articles escape the schemes of counterfeiters. It is important to use only the genuine, therefore insist always upon obtaining original packages. Two ounce, 25c.; eight ounce, \$1.00. Literature and a sample on request. Address all communications to J. S. Tyree, Chemist, Washington, D. C.

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**THE CARE OF GROWING GIRLS.**—One of the most responsible tasks of the family physician is to advise parents of girls entering upon their 'teens, as to the diet, mode of life, and hygienic measures best calculated to preserve the health of budding womanhood. In dealing with these cases the practitioner is often called upon to treat the anemia which in such a large proportion of instances characterizes the unfolding of the growing girl. Full well does the family doctor grasp the meaning of this anemia, and the vast importance of combating it before it is too late, —before the impoverished condition of the blood of puberty has left its imprint upon the powers of resistance of the adult organism; has done permanent damage to the future woman and the future mother.

Unsuitable diet, an over-indulgence in sweets or spices, over-study, lack of fresh air and physical exercise, indulgence in late hours and abandonment to novel reading, to tight lacing, and other abominations of dress, contribute their quota to the causes of anemia in the growing girl. Each of these factors is, of course, removable by good common-sense advice to parents and by proper exercise of discipline. Still, when the damage has been done, we must assist nature in its generous work of restoration, and here it is that we are obliged to give that sovereign cure of impoverished blood, iron, in such form as may best be suited to these cases.

The question as to what form of iron we should give to produce the best possible effects has been solved by both experimental and clinical researches conducted during the past twenty-five years — ever since Bunge and Hamburger experimentally demonstrated the inferiority of inorganic preparations (Morat and Doyen, *Traité de Physiologie*, Paris, Masson 1904, I, 467). Iron, in the anemia of puberty, produces the best effects when given in a form that will stimulate digestion and increase assimilation, *i. e.*, in the form of the peptonate. With it should always be combined that second hematinic which has been shown to enhance the value of iron,—manganese,—and the two are best given in the form of the well-known solution, styled "Pepto-Mangan (Gude.)"

With this may be given, in the anemia of growing girls, minute doses of Fowlers' Solution, or else equally small doses of strychnia which may be incorporated with Pepto-Mangan as indicated in individual cases.

Pepto-Mangan has a great advantage over other forms of iron medication in that it does not constipate. Girls at puberty, however, are notoriously prone to constipation. Therefore this should receive proper attention, chiefly in the regulation of diet, including a sufficient amount of fruit, raw and cooked, and of cereals giving a large residue of cellulose.

With this method of treatment many a physician has achieved success which was rewarded tenfold by the sight of rosy faces and bright eyes.

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**CACTINA PILLETS.**—Dr. Stephen L. Strickler of Boggstown, Indiana, favorably comments on the action of Cactina Pillets as follows:

"I have used Cactina Pillets for ten years and can say they are more to be relied on than most anything in medicine that I know. They surely must be made of the drug gathered at the most favorable time of the year, because the cactus you buy on the market is not reliable."

Cactina Pillets have been on the market for twenty years, and testimony of this kind has been heaped upon it by the medical profession. It is being employed with benefit in functional, cardiac, and circulatory disturbances and exhibits no cumulative action.

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**ANTIPHLOGISTINE VERSUS OPIUM.**—Inflamed states of the various organs of the body frequently give rise to pain of such urgent character as to demand active steps looking to its relief. Upon seeing the patient for the first time (he has called his physician because his suffering has become intolerable), the medical attendant is met with a peremptory demand for relief from the suffering.

With a willingness, which frequently overrides their better judgment, some physicians resort to the hypodermic needle indiscriminately, and, in too many cases, a greater evil has followed the lesser one. The free habit of using morphine or some other form of opium is not a judicious practice, and for several reasons. The exact seat of an inflammation, for instance, might become difficult to locate, and thus a clear diagnosis interfered with. But the greater objection to the use of opium is the possibility of adding a recruit to the ever-growing army of habitues.

Every time there occurs to a doctor the apparent need for opium he should deliberate well before resort is had to the needle. If, after careful consideration, his best judgment advises the use of opium, it should be given in some form by mouth. If the needle is used the patient at once knows what he is getting, but he is not so likely to acquire this information if it be given otherwise.

For relieving the pain of the inflammations Antiphlogistine will easily take the place of opium. The relief following may not be so prompt

and so complete, but the edge of the suffering is taken off within a short time, and soon the patient is in a comfortable condition and has escaped the possibility of becoming addicted to a drug. There is not the likelihood that a patient, relieved from pain by it, will begin eating or using Antiphlogistine in any other way—which likelihood is the greatest disadvantage of opium.

In the future let your morphine become stale, and keep your Antiphlogistine fresh—use it in inflammation.—*The Medical Era*.

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MIXED BROMIDES.—Dr. Robert J. Preston, Brown-Sequard, Hazard, and other learned men of the profession have strongly advocated a combination of bromide salts in preference to the use of potassium bromide alone. The salts of the lighter metals, as sodium, ammonium, and lithium, seem to have less of the untoward action than the potassium salt. In Peacock's Bromides we have a union of these salts that has proven itself a most available and trustworthy combination. In this regard we are pleased to quote Dr. Caldwell, who says: "It is a mystery to me why bromide of potassium is so generally used by the profession. Its action is not nearly as reliable as the bromide of sodium, but better still is a combination of bromides. For such a preparation I use Peacock's Bromides, as I know it is made of the purest salts, and the difference between its therapeutic action and that of the commercial salts is very great. I have used it for years, and it is always reliable and staple. It is impossible to obtain satisfactory results in prescribing bromide of potassium, and thus I have depended upon this preparation. I have also learned that it is necessary to see that my prescription for it be filled at a first-class pharmacy."

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THE WAVERING BALANCE between health and disease is often promptly determined by the judicious use of an effective tonic. Therefore it is due to a recognition of this highly important therapeutic fact that so many successful practitioners avail themselves of the specific properties of Gray's Glycerine Tonic Comp.

This well known product, representing the highest quality, the most careful preparation, and a constant uniformity of strength, has a remarkable field of usefulness, especially in conditions and at seasons of the year when cod-liver oil and other tonics are contraindicated.

It acts by encouraging and assisting natural processes, and the results produced are normal and permanent—not artificial and temporary.

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DIETS FOR THE SICK.—The importance of having the patient know exactly what diet he should take oftentimes enhances the value of the medical treatment. New clinical observations along the line of diet are often noted in medical journals, and in the edition of Diet Leaflets prepared by

Reed and Carnrick, these points have been added, thus bringing this little book up to date.

They will be pleased to furnish to physicians a copy of this book, in celluloid covers, of a size convenient for the vest pocket, upon request. Simply write to Reed and Carnrick, Jersey City, N. J., asking for their "Diet Leaflets."

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A SUGGESTION.—The new Glyco-Thymoline Eye Bath, which is constructed from a single piece of aluminum, has been found of exceptional service when used as a vessel to heat hypodermic solutions to the proper temperature. This little hint comes from a physician who has frequently found himself wanting just such a device. The Glyco-Thymoline people will be glad to send you one of these cups if you desire it. C. E. F.

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IF THE DIPLOCOCCUS RHEUMATICUS is the exciting cause of *rheumatism*, we know also, since the few only are affected, that the germ alone is not all-sufficient. There must be, as well, a condition of the system favorable to the multiplication of the germ. This means predisposition. Since we cannot escape bacterial contact the treatment of rheumatism means what can be done to overcome the predisposing cause. The toxemia of faulty metabolism is the one great contributory factor. The treatment of toxemia is by elimination. Alkalithia is the ideal eliminant, and will be found the ideal treatment for rheumatism.

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THE APOSTLE OF PURITY.—Dr. C. A. Bryce resents the imputation that the independent medical journals are controlled by their advertising patronage, and in a forceful editorial in the August number of *The Southern Clinic*, throws back the charge in the following vigorous language. He says:—"Dr. Simmons, of the J. A. M. A., seems to harbor a peculiar dislike to antikamnia and its compounds, and in its write-up in his pamphlet, sent gratuitously far and wide, he appeals pathetically to all physicians and journalists to leave the evil thing alone. He doesn't see how any self-respecting journalist can carry the advertisement of antikamnia, nor how any physician 'with a particle of self-respect or manhood' can continue to support any such journal.

"The *Southern Clinic* carries the advertisement of antikamnia and carries a large and influential list of subscribers—men who are neither renegades, proselytes nor ringsters—men who are, to say the least, as honorable, self-respecting, and truthful as this Apostle of Purity who seesaws like a supple-jack between truth and policy. We carry the antikamnia advertisement because we know from many years' experience that it will do just what we expect antikamnia to do. We know its effects, its dose, and that it is safe to administer in the doses we have proven. We have found it a valuable remedy, and as such, use it largely in a variety of

diseases. We have never had any bad results from its use in large or small doses in old or young. We therefore carry it as an advertisement and prescribe it in practice because we *know what we are doing*, and can confidently recommend it to our professional brethren. We presume they likewise, with all due respect for themselves and honesty of purpose, prescribe antikamnia and support the *Clinic* because they know that they are both good and honest productions. Moreover, as we are relying upon our own knowledge and responsibility, we prefer *our* opinion to that of the worthy Simmons."

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THE LEDERLE LABORATORIES of New York City, make the following statement:—"We purchased a package of the medicinal preparation called Emulsion Cloftlin, at a pharmacy on Broadway, in this city, and, upon careful analysis of the same, we find it contains the following medicinal ingredients in the quantities below stated; to wit:

Cod-Liver Oil, by weight..... 51.05%

Glycerine, by weight..... 14.41%

Calcium Hypophosphite, by weight... 1.57% — 7 grains per fluid oz.

Manganese Hypophosphite, by weight, 0.66% — 3 grains per fluid oz.

This is equivalent, in the case of the Cod-Liver Oil, to fully 50% by volume, and of the Glycerine 10%."

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THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF TENNESSEE opened its regular session on Monday, Sept. 16, with fully as large an attendance as the opening of last year. The session will extend over seven and one-half months, and it is fully expected that a much larger class than last year will be assembled by the first of the current month.

With the college dispensary and the clinics at the city hospital the advanced students will be afforded ample facilities of studying both surgical and medical conditions. Medical students have for many years recognized the favorable advantages offered by the city of Nashville, and this excellent institution has always commanded a liberal share of patronage. The present active, efficient and able faculty have good reason to be well satisfied with the present outlook.

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DRS. HAYDEN AND BROWN who established and have been operating a Sanitarium in East Nashville for some eighteen months for the treatment of Alcoholism, Drug Addictions and Diseases of the Nervous System, have been compelled on account of the growth of their business and from the want of sufficient room and other conveniences, to remove their institution from East Nashville to 1400 Broadway, where they will be supplied with every modern convenience for the rational, scientific and humane treatment of this class of diseases.

Their sanitarium is being run in strictly an ethical manner and by



ethical physicians, and justly deserves the endorsement and unqualified support of the entire medical profession.

Their new building is conveniently located, large and commodious, and is fitted up with all latest contrivances and all modern medical and electrical appliances necessary for the treatment of their patients.

Members of the medical profession are most cordially invited to visit this institution.

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THE VANDERBILT UNIVERSITY, MEDICAL DEPARTMENT, commenced its regular session on Monday, Sept. 16, and notwithstanding the additional requirements on matriculation, and an increase in the regular fees for the session, the classes assembled on the opening day were fully as large as last year. The faculty have established four hospital wards, one each for male and female white and colored patients, and notwithstanding that they will incur an expense of from five to ten thousand dollars, the clinical advantages to be afforded the advanced students will amply repay the expenditure. In addition, the college dispensary and the city hospital will also afford numerous clinics.

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ENTITLED TO A SQUARE DEAL.—A communication recently received from Messrs. Fairchild Bros. and Foster states as follows:—

"We received a request from the Ways and Means Committee of the N. A. R. D. to subscribe to the fund for the entertainment of the members of the N. A. R. D. at its forthcoming convention in the city of Chicago. In view of previous experience it occurred to us to take steps to ascertain to what extent that "community of interest" expressed implied and naturally anticipated, did actually prevail. We therefore caused prescriptions, in which Essence of Pepsine, Fairchild's, was plainly specified, to be sent to nine different drug stores in Chicago, two of them on State St., three on South Halstead St. and one each on East 35th St., West 21st St., Harvard Ave., and Milwaukee Ave.

"Each vial so dispensed was upon receipt immediately sealed in its original wrapper and delivered to us, with complete data in every detail from the writing to the dispensing and sealing of the prescription. Upon examination the fluid dispensed by each of these druggists was found to be a substitute—some preparation not made by us and not Fairchild's Essence.

"These substitutes were unlike in composition; they were of varying degrees of inferiority and some practically worthless for the purpose for which Fairchild's Essence of Pepsine is esteemed and employed.

"There is one significant fact that should also be mentioned, and that is that the price at which the substitutes were sold is that charged the patient by pharmacists who dispense Fairchild's Essence of Pepsine when it is ordered."



THE HYPOPHOSPHITES.—Being soluble in both hydrochloric and lactic acid, it is evident that following their entrance into the stomach, the hypophosphites must pass into the blood stream. Only small amounts, however, of these salts can be appropriated in this manner; and, for this reason, small doses are quite as effective as are large ones, for all in excess of what will dissolve in the acids of the stomach must escape with the feces.

As is the case with many other remedial agents, the value of the hypophosphites is, to an amazing extent, dependent upon the manner in which they are qualitatively and quantitatively combined for administration. Indeed, it is a clinically established fact that these salts afford the most gratifying results when they are administered in the form originated by Mr. Fellows; that is, Fellows' Syrup of Hypophosphites, which consists of potash, lime, iron, manganese, phosphorus and the tonic alkaloids—quinine and strychnine. As a matter of fact, the therapeutic superiority of this form of the hypophosphites has been demonstrated so repeatedly that it is now regarded as a scientific certainty.

"PARALDEHYD" possesses many of the good without the evil qualities of chloral. Used in insomnia resulting from various causes. The objectionable taste of the chemical is, to a great extent, disguised in Robinson's Elixir Paraldehyd (see page 17), which is an elegant preparation.

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## *Reviews and Book Notices.*

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THE PRINCIPLES AND PRACTICE OF MODERN SURGERY. By ROSWELL PARK, M. D., Professor of Surgery in the University of Buffalo, Buffalo, N. Y. In one very handsome imperial octavo volume of 1072 pages, with 722 engravings and 60 full-page plates in colors and monochrome. Cloth, \$7.00, net; leather, \$8.00, net. Lea Brothers & Co., Philadelphia and New York, 1907.

The sign of a great and growing subject is found in its literature, the measure of its activity and growth. This is particularly applicable to surgery, endless and unresting in its advance and possibilities. However, no justification is necessary in the case of a work from the pen of so eminent and mature a surgeon as Professor Park. He is peculiarly qualified upon both main divisions, as always an enthusiastic worker in surgical pathology, and as an equally resourceful and successful practitioner of the art. Thus he has been able to produce a book which is well balanced,

complete, and with all its information well interrelated. His skill as a teacher of the first rank is manifest in his orderly arrangement and clear exposition. Accordingly his work possesses a wide range of importance, for it affords the student a logical training, thereby minimizing the labor both for him and his teacher, and serves the general practitioner and surgeon equally as well as an authoritative guide in the most directly responsible branch of all professional work.

This new individual book is the successor of the *Surgery by American Authors* edited by Professor Park, which ran through three editions. His collaborators therein have most willingly placed their work and accompanying illustrations at his service. As Professor Park is equally at home in the surgical literature in English, German and French, the three languages to which everything in the civilized world must come for dissemination, his *Modern Surgery* may be trusted as an authoritative exposition of the world's most advanced views and practice at the present time.

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**PRACTICAL FEVER NURSING.** By EDWARD C. REGISTER, M. D., Professor of the Practice of Medicine in the North Carolina Medical College; Editor of the *Charlotte Medical Journal*, etc., etc. Octavo volume of 352 pages illustrated. Philadelphia and London: W. B. SAUNDERS COMPANY, 1907. Cloth, \$2.50 net.

We take great pleasure in most heartily commending the very excellent work of our editorial confrere.

This new work completely covers the field of fever nursing, and in such a practical, helpful way that nurses will find it of constant service. Dr. Register has concisely stated the pathology, prognosis, and treatment of each fever in as non-technical language as possible, in order that the nurse may care for her patient intelligently and realize fully the importance of certain signs and symptoms. The text is fully and excellently illustrated.

From the preface we make the following extract: "In the preparation of this volume the object has been to present to nurses a working text-book that will completely cover the field of prac-

tical fever nursing. A nurse, before she can intelligently care for a fever patient, must have some knowledge of the disease and its medical treatment. She cannot know the cause and significance of many of the symptoms unless she knows something of the pathological processes that are going on within the body, nor can she anticipate all that is expected of her by the physician unless she is at least partly familiar with the history and treatment of the fever which she is nursing. For this reason it is, as I interpret it, necessary, in the preparation of a work of this kind, to incorporate and describe in as non-technical a manner as possible the pathology of the different fevers, their prognosis, and the various methods of treatment."

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**INTERNATIONAL CLINICS.** A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to Students and Practitioners by leading members of the medical profession throughout the world.— Edited by WARFIELD T. LONGCOPE, M. D., Philadelphia, Pa., U. S. A., with the collaboration of William Osler, M. D., Oxford; John H. Musser, M. D., Philadelphia; Frank Billings, M. D., Chicago; Chas. H. Mayo, M. D., Rochester, Minn.; A. McPhedran, M. D., Toronto; Thomas M. Rotch, M. D., Boston; John G. Clark, M. D., Philadelphia; J. W. Ballantyne, M. D., Edinburgh; James J. Walsh, M. D., New York; John Harold, M. D., London; Richard Kretz, M. D., Vienna; with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Vol. III, seventeenth series. Octavo, 296 pages, illustrated in colors and black and white. Cloth, \$2.00; half leather, \$2.25. J. B. Lippincott & Co., Publishers, Philadelphia, 1907.

We have just received the third volume, 17th series of "International Clinics," and can most sincerely say of it, that it only needs to be examined to be appreciated by all who want to secure the latest views from some of the able and progressive members of the medical profession. This volume contains 4 articles on Treatment; 5 each on Medicine and Surgery; 2 on Gynecology; 3 each on Genito-Urinary Diseases and Ophthalmology; and one each on Dermatology, Neurology and Pathology. It has 33

plates and 11 illustrations; and the usual excellence in make-up is fully carried out by the publishers. The one short but exceedingly lucid article on "How to turn back the upper eyelid" will be well worth the price of the volume to many general practitioners and medical students.

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**FIVE HUNDRED SURGICAL SUGGESTIONS.** *Practical Brevities in Surgical Diagnosis and Treatment.* By WALTER M. BRICKNER, B. S., M. D., Chief of Surgical Department, Mount Sinai Hospital Dispensary, New York; Editor-in-Chief, *American Journal of Surgery*, and ELI MOSCHCOWITZ, A. B., M. D., Assistant Physician, Mount Sinai Hospital Dispensary, New York; Associate Editor, *American Journal of Surgery*. *Second Series.* Duodecimo; 125 pages. New York: SURGERY PUBLISHING Co., 92 William St., 1907. Price, \$1.00.

In this second series all the surgical suggestions of the first issue have been incorporated, and as many more, making a total of five hundred terse, useful "therapeutic hints and diagnostic wrinkles."

As before, the publication has been prepared in a manner worthy of its unique contents. It is a pocket manual de luxe!—printed in attractive Cheltenham type, on antique India tint paper, with marginal headings and subheads in contrasting ink, and with an artistic binding of heavy cloth, gold-lettered.

We warmly commend this book. Those wearied by searching for information through ponderous text-books and lengthy articles will find actual refreshment in Surgical Suggestions, everyone of the 500 paragraphs of which is a separate and useful bit of practical knowledge.

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### ***Selections.***

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**THE HYPODERMIC USE OF QUININE.**—Physicians who practice in northern zones and who rarely if ever come in contact with the malignant or pernicious forms of malarial infection have little conception of the gravity of the illness in patients who are so infected, and fail to appreciate how essential it is to overcome the malarial parasite by the immediate introduction into the blood

of adequate doses of the specific remedy, quinine. Because of the fact that sulphate of quinine, which is the salt which has been most commonly employed, is so insoluble and so prone to produce abscess, the hypodermic use of this drug in urgent cases has not met with the favor which it deserves. The hydrochloride of quinine, the bimuriate of quinine and urea, and the hydrobromide of quinine are, however, salts which are so soluble that they do not necessitate the injection of very large quantities of fluid. They seem to be less irritating and they more rarely cause abscess.

We read with a good deal of interest an interesting series of letters in the *Indian Medical Gazette* for March, 1907, contributed by surgeons in the Indian Medical Service, in which they give us the methods and results which they have pursued. One of these, Dr. L. B. Scott, states that he has employed acidified hydrochloride of quinine, dissolved in distilled water in the strength of 1 to 1 or 1 to 2, and that the dose which he is in the habit of giving is 10 grains, which can therefore be readily contained in the barrel of an ordinary 20-minim hypodermic syringe. Occasionally he has used sulphate of quinine, aiding its solution by the addition of 3 grains of tartaric acid to each 10 grains of the salt in 20 minims of water. Sometimes as much as 5 grains of tartaric acid is employed. When large doses are needed, he injects one barrellful, then separates the needle and barrel without removing the needle from the tissues, fills the barrel, and injects a second dose. In some instances, however, tetanus has followed the injection of quinine, and therefore he insists upon the necessity of absolute asepsis both as regards the patient's skin and the needle and syringe. The quinine should be given intramuscularly for the purpose of preventing recurring ague attacks and also to obviate relapse, and he states that this method has put a stop to recurrent ague when doses by the mouth have failed. In one instance he carried out a series of experiments upon 74 successive sepoy soldiers coming to a regimental hospital with malarial fever. He treated alternate cases with 10 grains, given twice daily by the mouth, and the other cases by intramuscular injection. In some instances the doses were as small as 2 to 5 grains, but as a rule he gave as much as 10 grains by the needle, or, to

be more accurate, 43 per cent. of the injections were of 3 to 5 grains and 57 per cent. were 8 to 10 grains. Each case received only one injection a day. Taking the average number of days of fever after commencement of treatment, although less than half the dose was used by the intramuscular method the result was distinctly in favor of the use of quinine by the needle, although the time gained was not very noteworthy. Because the drug is so slowly absorbed when given intramuscularly in some cases, he thinks that this method may be advantageous in that it provides a reservoir of quinine which is continuously absorbed and so maintains an antimalarial influence. Further, he states that the planters of Cachar very much favor the injection method as against the oral method.

Surgeon Moncrieff has used a large number of the different salts of quinine by the hypodermic needle, and regards it as a valuable means of combating this infection. The salt which he prefers is the acid hydrobromide, which when dissolved makes a solution of the strength of 1 grain to  $7\frac{1}{2}$  minims of water, which quantity of water is excessive, but is used with the deliberate purpose of permitting thorough sterilization by boiling without risk of precipitating the salt. Contrary to what one might expect, he asserts that quinine is more easily given to infants by hypodermic injection than by the mouth, provided that the needle is sharp and of small caliber; and further that these requirements are met by the fine Schimmel needles sold by Parke, Davis & Co. He agrees with Scott in thinking that the hypodermic injection method is not by any means the most rapid way of getting quinine into the system. At one time he considered it the quickest method which could be used next to the intravenous injection, but now he believes that the quinine is so slowly absorbed when given hypodermically that it is not of very great value when the symptoms are urgent. Indeed, he believes that the administration of the drug by the mouth may be more prompt in its effect. He favors the assertion of Holt, of New York, that relatively larger doses of quinine are required for children than for adults, and recommends that infants of a year should usually receive 8 to 12 grains of the sulphate, or 10 to 14 grains of the bisulphate,

daily. He asserts that Holt occasionally gives double this quantity.

This symposium also contains two more letters upon the same subject by East Indian surgeons. Dr. Cook states that he failed to get rid of a severe malarial infection in his own case until he consulted Sir Patrick Manson, who advised the hypodermic use of acid bichloride of quinine, ten grains being injected into the gluteal muscles every night for a week, and effervescing tablets of magnesium sulphate every morning by the mouth. These injections left some soreness and stiffness for a number of days, but were efficacious in curing the fever when the use of the drug by the mouth failed.

Finally, we have the communication of Dr. Williamson, of Bhandara, in which he strongly recommends the bihydrochloride, of which one grain will dissolve in less than a minim of water. He injects 10 to 15 drops of this fluid into one of the larger muscles, such as the biceps or gluteus, under the strictest anti-septic precautions, sterilizing his syringe with boiling olive oil or vaseline before using it, because the temperature of boiling oil is much higher than that of boiling water. He thinks that there is no danger of tetanus if boiling oil is used, his belief being based on his experience in giving many hundreds of intramuscular injections of quinine.

Doubtless many of our readers in the southern portions of the United States, and in tropical countries, will consider that these various communications are of very great practical value, and we have no doubt that the favorable experience of these East Indian surgeons will do much toward popularizing this method of combating malarial disease in suitable cases.—*Therapeutic Gazette*.

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PRIMARY ULCERATIVE ENDOCARDITIS WITH RECOVERY.—The patient, a widow, aged 51 years; nativity, United States. In August, 1905, on a hot day, she was obliged to do a great deal of cooking, and became very much overheated. That evening she took a severe chill which was followed by fever and marked prostration. The following day she had another chill, followed

by fever and prostration, but the chill did not occur at the same time as the previous day. For the next two days she had no chill, but was weak, complained of great thirst, bowels constipated, and headache. On the fifth day of her illness she had a very severe chill late in the evening, followed by high fever, profuse sweating, and marked prostration. On the sixth day she had another chill in the morning, followed by fever and prostration. On the 7th, 8th, 9th, 10th, and 12th, and nearly every day throughout her illness, she had a chill, followed by the very same symptoms as stated above; but the chills never occurred at the same time, nor did they last exactly the same length of time.

The temperature during the height of fever varied from 102 3-5° F. to 104° F. Her first physician diagnosed her trouble malaria, and prescribed quinine to its full physiological effect, but without avail. A second physician thought her trouble one of typhoid fever, and treated her accordingly. She had been sick from August until January, when the third physician and I in consultation diagnosed her condition as ulcerative endocarditis. At that time she was not expected to live. Her temperature fluctuated from 99° F. to 104° F., never being the same at the stated hour from day to day. The pulse varied from 100 to 120 per minute, and her respiration from 20 to 30 per minute. Most of the time she was in a semi-conscious condition with slight delirium. She had drenching sweats, after which she was exhausted, and her temperature would often fall to 97° F.

The laboratory findings, history of rheumatism, and acute infectious fevers were negative, and the physical examination revealed nothing more than a slight hæmic murmur. Hence, we based our diagnosis entirely on the "status præsens," and directed the treatment toward that end, which was largely supportive. The feeding was pushed vigorously, and the most concentrated liquid foods, such as milk, eggs, and freshly expressed beef juice, were employed.

Medicinally the fluid extract of *convallaria majalis* was prescribed as a vascular stimulant, giving five minims four times daily and increased the dose one minim daily until she took ten minims four times daily. *Convallaria* was selected on account



of its special influence upon the heart. In small doses this drug strengthens the heart's action; while in large doses it restrains excessive cardiac activity. In mitral diseases it is of especial value. It quickly relieves the dyspnea and palpitation, and after having been given for two or three days, may be discontinued for a week or more without recurrence of the symptoms. *Convallaria* seldom disagrees with the stomach, and its cumulative action is seldom observed. As a rule the appetite and digestion seem to improve under its use, and a regular action of the bowels is promoted. It increases the secretion of the urine, and when compensation has failed, invigorates the heart and reduces edema. It favorably influences the diuresis in dropsy of renal or hepatic origin. In chronic Bright's disease it reduces the edema and lessens albuminuria. Good results have followed its administration in cardiac debility, due to pneumonia or typhoid fever. In some cases of idiopathic asthma it relaxes the spasm of the arterioles. It sometimes is serviceable in *tic douloureux* and other forms of neuralgia, insomnia, and in restlessness of fever.

The palpitation and dyspnea of phthisis are mitigated by the use of *convallaria*. It is, likewise, of utility in the irregularity of the heart dependent upon acute pneumonia, bronchitis, or emphysema, but is ineffective in fatty degeneration of the heart. At the end of ten days' treatment with *convallaria* the fluctuation of temperature was less, being from 98° F. to 102° F. The pulse became more regular, of better volume, and from 90 to 95 beats per minute. The chills and fever were also less marked. Twenty days after *convallaria* was employed she began to run a normal temperature, had no chills or fever, pulse from 80 to 85 per minute. Improvement was gradual, with only a slight remission of temperature for two days. After *convallaria* had been administered for a month she was given tincture of *strophanthus*, minims ten, four times daily, and 1-40th of a grain of strychnine sulphate. The object for prescribing *strophanthus* was to obviate the possible cumulative action of *convallaria*, and because it is also a vascular tonic and stimulant. It does not disturb the gastro-intestinal canal; has very little or no cumulative

action, but its effects are not so lasting. It slows the heart beat, lengthens the intervals between the contractions, and increases the energy of the muscular tissue. The rise of arterial tension produced by strophanthus is due principally to the increased force of the cardiac contractions. It has a diuretic action due to the rise in blood pressure. It, moreover, has a quieting influence on the brain and medulla oblongata, thus becoming a nerve sedative.

The prognosis in this patient was very unfavorable. We expected the worst, and I believe that the convallaria saved her life in spite of the marked septic condition she presented. Ulcerative or septic endocarditis usually ends fatally, and those that recover are supposed to have had a benign form. I do not believe that such was the case in this patient. She had so many and severe symptoms of sepsis for too long a period to consider it a benign form.—*Jno. V. Shoemaker, M. D., L. L. D., in Canadian Practitioner.*

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TO CHECK THE FLOW OF MILK.—When the mother is not to raise her child upon the breast, control of the flow of milk becomes a serious problem sometimes. If the breasts be bound tightly by a bandage extending from three or four inches below the mammæ to the clavicle and the pressure be continued firmly and evenly for several days the flow will be prevented in some and greatly diminished in others. If milk forms abundantly some of it must be drawn off with a breast-pump. Equal parts of tincture of belladonna and tincture of camphor should be rubbed into the skin over each breast twice daily (at the time when the milk is taken) and the pressure resumed. If this be done before the breasts become “caked” they soon are found to be soft, painless, and free from secretion. But often an acute inflammation (mastitis) arises; the breasts are found hard and knotty, the skin red, shiny, and terribly tender, the patient has much pain and a temperature of 99 1-2° or 100° F. In such cases equal parts of unguentum belladonnæ and of lanolin may be mixed together and rubbed over the areola and skin; with a kaolin-glycerin poultice over all. Abscess may very often be thus prevented.—*American Journal of Clinical Medicine.*

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***Original Communications.***

**OPEN METHOD OF TREATING FRACTURES.\***

**BY DUNCAN EVE, M. D., OF NASHVILLE, TENN.**

I AGREE with Dr. James A. Kelly, of Philadelphia, who, in the *Journal of the American Medical Association* of Jan. 13 and 20, 1906, states: "While it is not advisable or necessary to operate in all closed fractures, yet there are certain bones which, when fractured, generally demand operative interference if we would obtain the best anatomical and functional results. Many authorities still maintain that no closed fracture should be converted into an open one, but there are some fractures in which even the most conservative surgeons will admit that, were it not for the danger of sepsis intervening, better functional results could be obtained by operation. Among such may be mentioned the following:

\* Read at meeting of Mississippi Valley Med. Assn., at Columbus, Ohio.

(1) Fractures of the neck of the femur in patients under fifty years; (2) fractures of the shaft of the femur; (3) fractures of the patella; (4) oblique fractures of the tibia, either alone or in combination with fractures of the fibula; (5) fractures of the clavicle with marked displacement; (6) fractures of the upper end and of the condyles of the humerus; (7) fractures of the olecranon, with marked separation of the fragments; (8) fractures of the shaft of the radius; (9) fractures of the spine and skull. In all cases in which marked comminution of the fragments is present and when reduction is impossible, in oblique and spiral fractures of the bones of the extremities, operative intervention is justified. Many of the deformities, pseudoarthrosis, and loss of function seen to follow fractures will thus, in most instances, be obviated. The unsightly deformities which so seriously destroy the usefulness of the part and predispose to refracture will be prevented. Under this heading may be included fractures in which pressure is brought to bear on neighboring viscera, nerves, and bloodvessels, fractures associated with dislocations, and fractures involving joints."

By exposing the seat of fracture, the accumulated excess of blood or effused serum can escape, and at the same time permit the removal of any soft tissues that may be between the ends of the bone. Furthermore, in case of a comminuted fracture, the surgeon can remove loose fragments of bone which have become entirely separated from their periosteal covering.

The technique, after obtaining most thorough cleanliness, is to make an incision large enough to enable the surgeon to deal effectually with the fragments. It should be made also in a location which will involve a minimum chance of injuring important structures, and give easy access to the ends of the bone. The skin should be excluded from the wound by attaching sterile cloths to the cutaneous margins by clamps.

After exposing the fragments, they should be carefully examined, and all clots and intervening structures removed and accurate apposition secured. Manipulation and extension with leverage may be necessary; and powerful forceps, such as Peters', may be found of great advantage to temporarily retain position,

while silver wire, absorbable sutures, silk-worm gut, screws or clamps, etc., are employed to permanently maintain coaptation. If much oozing is expected, a drainage tube may be inserted before the wound is closed. An immobilizing dressing should then be applied to the part. Stimson wisely says: "The operative methods can be used with confidence when surrounded with every protection. He habitually uses them, but he never teaches them as proper routine practice, and strongly advises against their use except by those who have had experience, who have formed the habit of taking precautions, and who have the aid of skilled assistants."

As to the retention method or suture employed, I must confess after an experience with Gussenbauer's clamp, Schreiber's ivory pins, Elberg's absorbable aluminum cylinders, silver wire, and the several absorbable sutures, etc., that I prefer some form of absorbable suture. Of late I am using iodized catgut with great satisfaction.

I desire to report two cases. One I have under treatment now, and the other lately dismissed:—

Miss A. S., aged 34, healthy and strong, received a fall in an elevator from the third story to the basement of a building on August 14, last, and sustained a double fracture of her patellæ. She was moved in an ambulance to our Infirmary, when it was found the right knee-cap had a simple transverse fracture just below its middle, in the furrow; and the left patella had also a transverse fracture, coupled with a vertical line of fracture running up the lower outer quadrant, communicating with the transverse one, making, therefore, a comminuted condition. The preparatory treatment consisted in applying a flannel bandage from the toes to the hips, making as firm pressure as practicable over the knees; then well-padded posterior splints were employed, elevation of the limbs to an angle of about forty-five degrees, and the application of an ice-bag over the knees. Having in this way prevented much of the usual swelling that often takes place, on the fifth day after the injury, with the necessary preparations and precautions, I made a median longitudinal incision down to the bones, exposing not only the fragments, but as well the at-

tachments of the ligamentum patellæ and quadriceps tendons, and after removing the blood-clots from the joints, the fractured borders of the fragments, and raising out of the way the fibroperiosteal shreds, joined the fragments of bone together with a No. 2 iodized catgut suture passed in succession close to the bone through the torn membrane and firmly tying together the opposing edges. This I found some difficulty in performing on the left or comminuted patella. I also followed, in this case, the suggestion of Blake of New York, and placed a No. 3 iodized catgut suture through the lower part of the quadriceps tendon and the upper part of the ligamentum patellæ, and had this second suture to serve the purpose of traction, holding the fragment in firm position. The external wounds were closed without drainage, the posterior splints reapplied, and the limbs kept in the elevated position. One week after the operation, the external sutures were removed and both limbs immobilized in plaster-of-Paris dressings, which were removed last Monday (October 7, inst). Perfect union of both patellæ resulted. The patient is now having massage with passive movement of the joints made with the expectation of getting up on crutches quite soon. I am satisfied little or no functional impairment will eventuate.

The next case is that of a young man, who on May 12, last, from indirect violence, received an oblique fracture of the shaft of his right radius, just above the insertion of the pronator radii teres muscle; and after reduction it was found impossible to maintain, by ordinary means, the fragments in coaptation. The use of an anterior right-angled splint applied again and again, but in every instance rotatory displacement was observable. I therefore determined to clamp the ends of the bone, but finding the periosteum extensively peeled off with fragments, in this instance I simply brought the torn bone membrane together with No. 2 iodized catgut sutures and at once noticed that the fragments were satisfactorily held in proper position. The incised muscles were also united with iodized catgut, and the external wound was closed in the usual manner, without drainage. The same anterior right-angled splint was again employed for immobilization for four weeks, when it was found that union with

perfect function resulted. So far as we know, this is the first use of a suture alone in the periosteum to maintain the coaptation of a fracture in the upper part of the radius.

Those suffering from certain fractures above enumerated, and others yet to be determined, whose condition will permit, and whose environment will afford skilful care and treatment, need not hesitate to submit to operation, when commensurate advantages appeal to the discretion of the patient or surgeon. Operation should be deferred, if feasible, until after the acute symptoms of the primary injury have subsided, *i. e.*, from four or five days or a week. That in compound fractures operative treatment should be adopted, appears to me to be self-evident. Also, in instances of a crippled fellow limb, of physical or business demands, of deteriorating personal discomfort, and of prospective activity of a perplexing nature, the wisdom of operation can well be considered. Prospective impairment of function, and embarrassing delay of recovery, invite the consideration of active interference. I am opposed, however, to the policy and practice of those surgeons who operate, only because a bone is broken, and irrespective of the present dangers or the future benefits to the patient.

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(A) DEPRESSED AND INCARCERATED FRACTURE OF THE RIBS: PRESENTATION OF CASE AND REPORT OF OPERATION FOR.

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(B) FRACTURE OF PATELLÆ: DIFFERENT METHODS OF OPERATION FOR, AND PRESENTATION OF SPECIMENS.\*

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BY R. E. FORT, M. D., OF NASHVILLE, TENN.

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(A) ACCORDING to Gurlt seventeen per cent. of all bony fractures occur in the ribs. The form of fracture varies with the vulnerating force.

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\* Presented to the Nashville Academy of Medicine, at its regular meeting, Sept. 17, 1907.

The comminuted or splintered fracture results from direct force, such as is inflicted by a small missile; while transverse fractures follow indirect force, such as forced compression of the chest in an antero-posterior or oblique direction. In the latter case one or many ribs may be simultaneously fractured.

Dislocation of the costal cartilages is not of rare occurrence. This is true on account of the peculiar socket-like articulation of the ribs with the sternum.

Complications of costal fractures are spoken of as follows: In gun-shot wounds, penetration of the pleura or lung is a complication much more severe than the fracture itself. Severe contusions or even laceration of the lung tissue may occur in children without fracture of the rib. This, of course, is accounted for by the flexibility of the bony wall of the chest in childhood. In laceration of the lung, fragments of the fracture are forced through both layers of the pleura. In this case we may have a hemothorax or pneumothorax, one or both complicating. Wound of the intercostal, long thoracic, or rarely the internal mammary artery may also complicate a costal fracture.

So far as my investigations have extended, this covers the list of complications laid down by authorities, and it is for this reason that I am taking the liberty of reporting the following case:—

*Case 1.*—I present Mr. R. A. W., locomotive engineer, who was caught between an engine and a car at the triangle of a switch, receiving a crushing wound of the chest, the force being applied in an oblique direction. Upon examination it was apparent that there was a depressed fracture of the third, fourth, and fifth costal cartilages, cartilages and ribs being forced downward and incarcerated under the sternum.

In addition to the physical signs described, there was a sense of cardiac and precordial depression, due, I am sure, to pressure upon the pericardium, and not from pressure upon the lung.

The necessity of elevation of the ribs was the first question which presented itself to me; consequently, operation was advised. A vertical incision was made of about six inches. The fibers of the pectoralis major muscle were divided, coming down upon the seat of fractures.



The two most important considerations were: (1) To avoid wounding the internal mammary artery which was immediately external to the seat of fracture. (2) To avoid entering the pericardium.

It was seen that the ribs were depressed well under the sternum and could not easily be elevated to the point of reduction. Elevation was accomplished by seizing the end of the rib with a blunt tenaculum, and at the same time forcing the shoulder backward. The costal cartilage was sutured to the cartilage of sternum with a figure-of-eight suture of No. 3 chromic catgut. The same technic was carried out in the elevation of the other two ribs. The pectoral muscle was secured by a double row of cat-gut sutures and the wound closed.

When the patient reacted from anesthesia the sense of compression was relieved and never returned, and he made an uninterrupted recovery.

(B) According to v. Bruns one and four tenths per cent. of all bony fractures occur in the patella, and it is much more common in men than in women, eighty-eight per cent.

The varieties of fractures are simple, compound, transverse, longitudinal, oblique, and comminuted.

Excluding the compound fracture, my experience has been that the location or direction of the fracture-line will only slightly influence the end results. Sub-aponeurotic fractures will not receive consideration here, because there is no deformity, loss of function, or crepitus. It is never diagnosed without the X-ray, and should not come within the scope of a paper discussing the operative treatment of fracture of the patella.

In a large majority of patella fractures, we have, in addition to laceration of the fascia and capsule, laceration of the reinforcing tendinous fibers of the vastus internus on the inner side, and the prolongation of the fascia lata on the outer side. This is called by v. Bergman "the reserve" extensor apparatus of the leg. The clinical observation of Macewen and Konig, with the experiments of Hoffa, have proven conclusively in the majority of cases that the tear in the aponeurosis does not correspond with the bony fracture-line, but more frequently lies above or be-

low, resulting in aponeurotic tabs getting between the bony fragments and of course preventing bony union.

The diagnosis of fracture of the patella is not difficult, but the importance and difficulty of its proper surgical treatment is shown by Hamilton, who has collected ninety-one different operations for the approximation of the fragments of this bone. This fact alone is proof conclusive that the ideal method has not been reached.

It would be tedious and unprofitable to enter into the details of these surgical procedures, but I feel that a word as to the methods of the broad surgical principles which have taken place in the evolution of the treatment of these fractures from the old coaptation and fixation method, to the approved open suture method, will be of interest.

The means of coacting and fixing the fragments by non-operative measures are numerous. Plaster of Paris, adhesive plaster bandages, rubber plates moulded over the fragments, immobilization with the Volkmann posterior splint, etc. All of these methods are applicable to the sub-aponeurotic fractures, and all of them are inapplicable to a complete fracture for the following reasons: (1) Owing to the swelling of the part coaptation is impossible. (2) If the fragments can be brought together, the aponeurotic tabs will prevent exact coaptation, and ligamentous union will result.

The next of the old methods was the application of Malgaigne's and Trelat's clamps. These methods have been discarded and are merely of historic interest, and we now come to the suture methods: the subcutaneous and the open suture methods. Subcutaneous suture was first employed by Volkmann in 1868, and was the real foundation of all direct suture methods of this bone. Volkmann used a silk suture, passing transversely through the ligamentum patellæ and through the quadriceps extensor tendon close to the patella and the ends tied over gauze.

Kocher a little later used silver wire with a curved needle vertically underneath the patella. Ceci sutured the bone by boring through the fragments with an awl.

The most serious objections to the coaptation methods, also

obtained in the subcutaneous methods, namely, the interposition of the periosteum or aponeurotic shreds preventing proper approximation of the fragments and insuring ligamentous union.

Although Saverino and Ray Barton performed the open suture operation over three hundred years ago, Lister in 1878 did this operation, and with his aseptic comprehensions laid the foundation for the operation in its present perfection.

The individual ideas of operators with reference to doing the open suture operation are largely inconsequential. If certain broad surgical principles are applied, excellent results will be obtained in any of them.

*One* advantage of any open operation has removed the two obstacles which almost invariably gave us ligamentous union, resulting in either curtailment or loss of function of the limb, or the well known predisposition to refracture. That is, the possibility of visual inspection enabling the operator to remove all tissue which prevents exact coaptation of the fragments.

Personally, I prefer the transverse incision and coaptation by drilling the fragments obliquely, the exit of the drill emerging from the bony portion of the fragment escaping the cartilage which would bring it in contact with the knee joint, and the introduction of silver wire or large chromic catgut from above downward. I believe, with an equal amount of technical skill, as good results will be obtained from the vertical, the U or lateral skin incision, and securing coaptation by drilling the fragments transversely or passing the wire through the ligamentum patellæ and quadriceps extensor tendon. This is true, because, as stated above, the one great obstacle to bony union has been removed, the removal of interposing tissue.

. The time of operation in fracture of the patella has been a question of much discussion among surgeons, the time of election ranging from one day to three weeks. The cause of this difference of opinion has been, whether it is proper to operate before, during, or after the subsidence of synovitis and swelling. I believe if we wait until the acute symptoms have subsided and operate, that operative interference will re-establish synovitis, and it is obvious that the chances of union are better early than

late. Therefore, it is my practice to operate at once, and I have never had occasion to regret it, as my results, without exception, have been satisfactory.

Kraske, Zum Busche, and others have used massage and passive motion from the beginning, and report some astonishing results. I cannot believe such results are possible, in anything but relatively slight tears of the capsule. Certainly I would not risk wiring the patella and putting a patient on crutches the next day without splints, or allowing him to walk on the limb by the fourth or fifth day. And if I should be inclined to do so, I do not believe my patient would be physically so inclined. I feel that any such recommendations should be strongly condemned.

In cases of old fracture where the fragments cannot be approximated various osteoplastic methods have been used. Rosenberg turned down a flap of the quadriceps tendon for part of the upper fragment, and turned up part of the ligamentum patellæ with the lower fragment and sutured the two tendinous flaps together. Helferich filled in the gap with pieces of sterilized bone. Wolff bridged over the gaps with bone-flaps chiseled from the upper and lower fragments. Any method, however, at this time will yield poor results, which the more emphasizes the importance of early operation.

I would suggest the following, which, when supplemented by good mechanics, guarantees safety and practically always a good limb: (1) The surgeon must be equipped with a surgical conscience to do aseptic surgery in its fullest details. (2) He must be so circumstanced as to feel sure he is giving his patient the benefit of these aseptic accomplishments; and this can only be done with proper surgical surroundings. (3) Gloves must be worn by every one connected with the operation. (4) With gauze sponges gently cleanse the diastasis of the fracture. Manual handling of the parts should be minimized, forceps and scissors performing most of the service. (5) Never drain. This is an additional hazard of infection, and if the operation has been aseptically done, the effusion, which always follows operative procedure to a greater or less degree, remains aseptic, and will be absorbed, as is done in any synovitis where the joint is not opened.

I wish to report the following case: J. H., bridge carpenter, three years ago while at work fell, striking his right knee against the edge of a piece of bridge timber. He suffered great pain, and the capacity to extend his leg was immediately lost. I saw him at the end of twenty-four hours, when the separation of the patella at the junction of its middle with the lower third was apparent, and operation was advised. The fracture was entered by a transverse incision, coming down to the fracture, which involved separation of the aponeurosis, extending to and involving "the reserve" extensors of the leg. The fragments were drilled and wired vertically with small silver wire. The aponeurosis was closed by a continuous chromic catgut suture.

So much trauma was present that extensive synovitis was feared, so the limb was immobilized with a long posterior splint. This was kept on for a week, or until the acute synovitis and swelling had subsided, and the limb was put in plaster for five weeks. It was then removed and the patient allowed to walk on crutches. He completely recovered function of the limb and returned to his avocation, that of a bridge carpenter, within three months.

About fourteen months later he received another fall, the exact nature of which I do not know, but curiously enough, fractured the other patella at the same point. At this time he was operated on by Dr. Richard Barr of this city. The fragments were coapted and secured in position with catgut sutures through the fibrous investment. I have no record of the after-treatment, but he completely recovered the function of the limb and again returned to his work.

During May of this year he completed a debauch by suicide with opium, and it was my good fortune to have presented to me the two specimens which I exhibit to you. It will be seen in both we have excellent bony union. It will also be seen in the wired specimen, the wire has penetrated the cartilage of the patella. The drill was introduced obliquely from above downward, emerging above the cartilage, and here, as in many other reported cases, this in no wise interfered with the result.

In conversation with patient during his convalescence from

*Eng. by Nashville Photo Engraving Co.*

*From Photo by Thoms*

**FIGS. 1 and 2.** Anterior and posterior surfaces of right patella, fixed by wire suture through fragments. (Natural size.)

**FIGS. 3 and 4.** Anterior and posterior surfaces of left patella, fixed by cat-gut sutures through fibrous investment of fragments.

**A to B.** Line of fracture, which shows very plainly in Fig. 4.

the last fracture, he assured me that the joint was perfectly comfortable and only pained him when the skin was pressed against the wire.

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## THERAPEUTIC TIPS AND CLINICAL NOTES

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BY E. S. MC KEE, M. D., OF CINCINNATI, OHIO.

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*Hyperemic Bier.*—Professor Bier, who has gone from Bonn to Berlin to succeed von Bergman, is very busy getting his clinic in the Charite ready for his hyperemic treatment. Those who have been there report some wonderful results from the hyperemia treatment. For instance, the pain from gonorrhea which had persisted for six weeks was relieved inside of two days; also erysipelas and acute mastoiditis were relieved very quickly in the same way; many cases of acute abscess, phlegmon, acute injury, and tuberculosis. The entire treatment is unique, and although from reading descriptions of the treatment it sounds simple, it is not so by any means. When carefully carried out there should be no pain caused by the bandage or cupping glass, and the part should always be warm. If the constriction is so great as to cause the part to become cold it is harmful. Bier opens abscesses with a small incision, cups for five minutes and rests for five minutes, keeping this up for forty-five minutes each day. Tuberculous joints are treated for an hour each day. In gonorrheal arthritis the bandage is put on and left for variable periods, sometimes for twenty-four hours. Hyperemia seems slow and cumbersome, yet there is a place for it in therapy and it should be more generally studied and understood. The care and attention which Bier and his assistants give the treatment and their patients is truly wonderful.

*Veronal as an Aid to Chloroform Narcosis.*—Veronal in one gramme (15 gr.) doses is given one to two hours before the administration of chloroform. In the great majority of cases the patients are asleep or unconscious when brought in to be anesthetized. The period of excitement is shortened thereby, the quantity of the anesthetic is diminished, and the onset of nar-

cosis is very much helped. To lessen the stage of excitement, and to eliminate the unpleasant after-effects, such as headache and vomiting, veronal in conjunction with chloroform is highly beneficial.

*Amyl Nitrite in Hemoptysis.*—It appears at first thought to be madness to give a patient with a wounded and bleeding vessel a remedy which acts powerfully as a dilator of blood-vessels. This action, which, even though it is transient, produces an immediate fall in the blood pressure of the body in general by dilatation of the blood vessels throughout the body. The pressure of the vessel at the bleeding point is lowered and there is clotting of the blood and almost immediate cessation of hemorrhage. Dr. Francis W. Hare, who first used nitrite of amyl, quotes experiments in an article in the first number of the *British Journal of Tuberculosis* which go to show that it has a direct vaso-constrictor action on the vessels of the pulmonary periphery in spite of a vaso-dilator action elsewhere. This is different from ergot, adrenalin, etc., where there is no fall in the general pressure. Nitrite of amyl causes no reactional pulmonary hyperemia, whereas adrenalin apparently does. One should always carry three minim pearls of nitrite of amyl with him, so that when called to a case of hemoptysis he can break one of them, tell the patient to inhale it quietly and regularly, warning him of the sensation of fulness in the head which may alarm him. The hemorrhage usually stops at once, though the patient may continue to cough up clotted blood previously swallowed. Nitrite of amyl is probably the best drug to administer first in any hemorrhage.

*Permanent Apomorphine Solution.*—A. Tautman, writing on this subject in the *Pharmaceutische Zeitung*, gives it as his opinion that the discoloration is due to oxidization, and states that it may be prevented by the addition of alcohol. He uses the following formula: Apomorphine hydrochlorate, 0.1; alcohol (90%) 50.00; acid hydrochl. dil., 10.00; aquæ destillatæ, ad. 200.00.

The apomorphine is first shaken with the alcohol and a clear solution is thus obtained. The acid is subsequently added. When a fresh solution is to be prepared a clean dry glass vessel should be taken. The solution is preserved in container of brown glass. Hermetically sealing is unnecessary.



M. G. Perguria, in the *Rep. de Pharm.*, xix, 1907, advances the theory that the green color is caused by oxidization in the light which is accelerated by the presence of ammonia in the atmosphere. To obviate this he operates in a room lighted by a red light and evaporates a small amount of acetic acid to neutralize the ammonia in the room. He also acidifies the solution by the addition of hydrochloric acid.

*Mercuric Oxide an Irritant to the Eye.*—Dufau demonstrates (*Bulletin de la societe de pharm. de Bordeaux*) that mercuric oxide, independent of all impurities, acts as an irritant to the conjunctiva. This action he explains as due to the salt in the tears, which acts on the mercuric oxide to form mercuric chloride and sodium hydrate. These agents are both caustic and irritant. Rancid lard ointments contain free fatty acids; this acid naturally combines with the alkali thus formed, hence a portion of the causticity disappears. Lard is preferable to petrolatum as a base for this ointment.

*The Treatment of Stye.*—Calcium sulphide in one half grain doses twice daily for an adult is beneficial in recurrent styes. Locally, until suppuration actually occurs, hot fomentations of saturated boracic acid solution should be used and the patient well purged. Suppuration having occurred, the eyelash in the center of the yellow area where the pus is pointing should be pulled out, and then if necessary the swelling should be incised and the hot boracic acid fomentations resumed. The more acute inflammatory inflammation having disappeared, the following should be applied sparingly to the edge of the eyelids with a camel's hair brush:  $\mathcal{R}$  Unguenti hydrargyri oxidi flavi, 1; petrolati, 2. M. fiat ungt. S. Apply night and morning.

*The Prohibition of Marriage in Heart Disease.*—Dr. G. F. Blacker, Obstetric Physician to University College Hospital, London, in a clinical lecture on, "Heart Disease in Relation to Pregnancy and Labor," reported in the *British Medical Journal*, May 25, 1907, says in conclusion:—

"There remains now for our consideration only one question, and that is the truth of the dictum laid down in many books, that a patient with heart disease should not marry, or if she does

marry should not have children, or if she does have children, should not suckle them. Such a dictum, you will agree, is too sweeping. The majority of women with heart disease pass through their pregnancy and confinement with perfect safety and have no symptoms, and therefore it is not right to say that a young woman who has heart disease should never marry. *If* her heart disease is compensated and there are no symptoms she may marry. Cardiac failure will occur sooner or later, as Hicks and French have pointed out, whether she becomes pregnant or not.

“The bad effect produced on the heart by pregnancy is, on the whole, not sufficiently marked to justify you in advising a patient strongly that she should not marry. It is true that if she marries it will be better for her not to have children, and it is true that if she has a child she should not suckle it, but it is not right that a woman who has heart disease should be forbidden to marry. Although the danger is undoubted and the mortality is as high as twelve per cent., it has been exaggerated, and the majority of these patients run no extra risk. So that a young girl who has heart disease which is compensated and has no complicating disease of the lungs or other viscera may be permitted to marry. Her heart will probably fail sooner or later, whether she marries or not, but whether the time of the onset of such failure of the heart will be precipitated by child-bearing is a matter which admits of argument. There will probably be some precipitation, but it is doubtful whether this risk is so marked as to justify you in denying her the right to marry.”

*Sterilized Women.*—Twenty thousand women in France, said Zola, in his “*Fecondite*,” had, of their own volition, submitted to be unsexed. Even if this be exaggerated, it is doubtless true that large numbers of women in France and elsewhere who wish to escape the exacting requirements of motherhood find operators unscrupulous enough to sterilize them. Tillaux, the noted French surgeon, relates the following: He was one day consulted by a married couple. The wife explained the state of affairs, saying that she and her husband were so much wrapped up in each other that they were anxious that their matromonial bliss be uninterrupted by the tiresome presence of pregnancy and the annoying

advent of a third party. She then added that they had decided to place herself in the skillful hands of the discreet surgeon. Tillaux was slightly taken aback for a moment, then, recovering himself, turned to the husband and said: "That is a very happy idea, but as the operation is much easier, less dangerous, and more efficacious when done on the man, I would recommend that it be done on you." It is needless to say that the offer was declined and the selfish husband went out, temporarily at least, a beaten if not a better man. The startling statements of Zola are reiterated by Leon Daudet in "Les Morticoles" and by Camille Pert in "Les Florifères."

*Causes of Sterility.*—G. G. Ward (*American Journal of Obstetrics*, August, 1906) has drawn the following conclusions:—

1. As conception is dependent upon healthy spermatozoa, normal ova, the union of the same, and the proper implantation of the fertilized egg, so sterility is most frequently dependent upon acquired lesions and congenital defects which cause sterility by interference with these essentials.

2. Many cases of acquired sterility are due to lesions which cause such changes in tubes and ovaries as to prevent the union of spermatozoa and ova.

3. Gonorrhea is the most frequent cause of such lesions.

4. Acquired sterility in many cases is due to endometritis, which causes such changes in the endometrium as to prevent the proper implantation of the impregnated ovum.

5. Sterility associated with flexions, displacements, subinvolution, fibroids, and other neoplasms is caused by the accompanying chronic endometritis, which prevents proper implantation.

6. A cause of unhealthy endometrium and of tubal disease which may prevent union of the male and female elements is the chronic inflammation and congestion of the uterus and adnexa incident to subinvolution and sepsis.

7. Gonorrhea not only causes sterility in women in seventy per cent. of cases, but is also the cause of sterility in the male.

8. In two thirds of all cases of gonorrhea in women, the woman has been infected by the man.

*Post-mortem Cesarean Section.*—(*British Med. Jour.*, Lon-

don, March 2, 1907, p. 521.) The saving of a life should always be attempted, but in the case of a woman dying in labor the friends of the deceased are in a position to forbid any attempt to save the child, even though the obstetrician can hear the fetal heart sounds. Hence successful post-mortem Cesarean section is more frequent in hospital than in private practice. Everke reports three Cesarean operations where the child was saved in two cases; the mother was already dead in all three. In one instance the uterus contained two fetuses, although apparently twin pregnancy had not been diagnosed. The mother at the beginning of labor was suffering from myocarditis, dyspnea, advanced general anasarca, and albuminuria. When the os was fully dilated the membranes were ruptured to hasten delivery. The cord prolapsed and turning was practiced, the foot being brought down. The patient died suddenly shortly afterwards. Cesarean section was at once performed; the incision involved the placenta. Two children were extracted from the uterus; the first, a female, was made to breathe normally after nearly two hours careful attention; the second, a male, was not saved, although the heart sounds were audible for two hours after birth.

In Everke's second successful case the mother was, as in the first, suffering from general anasarca and dyspnea; the renal symptoms were well marked. She died just as Dr. Everke was about to examine her; he immediately performed Cesarean section and saved the child. In the last case the infant was not saved, and the cause of maternal death was a local accident to labor, not a general malady. The mother was suddenly seized with violent abdominal pains at term, and her doctor gave her opium. Then a consultation was arranged with Dr. Everke at the patient's home, but just as he reached it he was informed that the patient had expired about a minute previously. He was permitted to open the abdomen immediately, and found three and one half pints of fresh and old blood free in the peritoneum. The uterus was laid open and the child delivered, but it was already dead. A fissure was detected in the serous coat of the uterus; the source of the bleeding — apparently some old adhesions — had been torn through when labor pains set in. It is worth remembering that

the hemorrhage in the third case proved deadly to the child, though the mother was in good health at the time of the complication; while in the case of twin labor, where one child was saved, the mother had died of an old-standing constitutional malady.

*Placenta Prævia Simulated by Obstruction of Pelvis by Non-Pregnant Half of Bicornate Uterus.*—Brown of Birmingham (*Surg., Gyn., and Obst.*) was consulted about a woman, aged 30, in the eighth month of her fourth pregnancy, on account of several severe hemorrhages. All her three previous pregnancies had been lingering. A soft, boggy mass filled the pelvis. The hemorrhages did not recur, and a fortnight later labor came on. The os admitted two fingers, and no placenta could be felt; the boggy mass was clearly in or outside the uterine wall. The gravid uterus lay much to the left of the middle line, and the mass was now taken for a senile or intraligamentous fibroid. The patient was placed in the genu-pectoral position, but the tumor could not be made to rise above the brim. Next day Cesarean section was performed, as the head was not engaged, and the child was living. It was delivered and saved, not without difficulty, owing to the position of the placenta. The tumor was entirely independent of the uterine wall from about the level of the os interum upwards; its true nature was revealed when the right tube and ovary were seen to be attached to its right side. The incision in the left cornu, whence the fetus had been extracted, was closed, and an opening made in the tumor, that is to say, in the right uterine cornu. No fetus was found, but a considerable amount of decidua was cleared away, the opening closed, and the abdominal incision united by suture without drainage. Convalescence was retarded by pneumonia and-phlebitis.

*The Pharmacopœal Preparations to be Kept on Hand by General Practitioners.*—This caption was the title of the prize question offered by the *New York Medical Journal*. The first prize for the best answer was awarded to Dr. George A. Graham, of Kansas City, Mo., and the second to Dr. Leon G. Tedesche, of Cincinnati. On three occasions lately Cincinnati has been honored with the first prize in these contests, but this is the first time she has come out second.

Dr. Graham thought that first and foremost, for croup and diphtheria, in a class by itself, is serum anti-diphtheriticum. A package of at least 3,000 units should be within reach of every practitioner, day and night. Second, were mentioned the drugs which should go in a hypodermic case. Third in the obstetric bag — ether, chloroform, saturated solution of boracic acid, fluid extract of ergot, bichloride of mercury tablets, subsulphate of iron, quinia sulphate, and petrolatum. Fourth, for poisoning and emergencies, amyl nitris (in pearls), aqua ammonia fortior, chloralum hydratum, mustard plasters, hydroxide of iron with magnesia, lime water, carbonate of magnesia, olive oil, croton oil, permanganate of potash, aromatic spirits of ammonia, wine of ipecac, and sulphate of zinc. Fourth, came a list to be kept for office use; sixth, for urinalysis. In the seventh class was a list of twenty remedies for the pocket-case. The doctor considered the best results to be obtained in the practice of medicine not by the indiscriminate use of many drugs, but the proper use of the few well-selected to meet the requirements of each case.

Dr. Tedesche, after a few preliminary remarks, gave a very comprehensive list, first arranged and numbered pharmacologically and then alphabetically, with cross references. The compilation was certainly a very valuable one.

The third paper on the list was that of Dr. Anthony W. Lamy, of Baltimore; fourth, Dr. Maxwell S. Simpson, Middle Valley, N. Y.; fifth, Dr. Abner C. Matthews, Earlville, N. Y., Dr. H. C. Macatee, Washington, D. C., and Dr. Lucien Lofton Bellefield, Emporia, Va. The last man on the list was the briefest, and for this reason would, by many, be given the first place. Besides a short and well-selected list, he enunciated the following sensible sentence: "No man is so well armed as the one fore-armed, consequently, in a restricted sense, I would suggest, first, have a place for everything and everything in its place." Dr. Matthews said: "We all have our hobbies. Mine is anti-toxin. It should be on hand constantly and sometimes changed. With a case of diphtheria to attend to it is surely no time to go round ringing telephone bells and consulting railroad time-tables."

Dispensing physicians have more than once been the object

of legislative attack, but the universal decision has always been that the right to furnish medicines to his patients is inherent in the physician, and that it is not probable that the legislature would attempt to deprive him of it or that the court would sustain any such attempt if made.

The doctor who enters the chamber of suffering at the hour of midnight armed only with a pencil and a piece of paper, is as unwise as the soldier who rushes to repel the midnight attack of the enemy, leaving his arms and ammunition in his tent.

Much valuable time, as well as prestige, is often lost in urgent cases by not having some few picked remedies at hand. One should always be prepared for the relief of severe pain, the emptying of the stomach and bowels, the checking of hemorrhage, and for heart affections. A hypodermic syringe — a good one which will not get out of order — and a few tubes of tablets should, like the doctor's nerve, be always with him, even in his dress suit. One tube should be morphia and atropia, one apomorphia, one strychnine, and one nitroglycerine. A tube of morphia alone might be added, as atropia is sometimes, though not often, objectionable. Combinations of strychnia, nitroglycerine, and digitaline may be added. For obstetric practice a sealed tube of aseptic ergot may be added, as well as one of morphia sulphate, hyoscine hydrobromide, and cactine. We have long been in need of a medicine which, used hypodermically, will cause a prompt evacuation of the bowels. This we seem to have in the codeine hydrochloride.

Confidential cases should receive their medicine direct from the physician. Emmenagogues are sometimes legally advisable, yet what drug clerk and his numerous young men friends will not surmise the worst, both regarding the patient and the physician, when a lady hands in a prescription for these remedies.

Gonorrhea and syphilis should be treated by the doctor in many cases without the aid of the druggist. The druggist treats numbers of them without the aid of the doctor. Such cases should be kept secret, and a drug-store is not a secret service. Besides this, there is the danger of the patient repeating his prescription indefinitely, to the injury of both himself and the doctor.



The general practitioner should keep bichloride of mercury, proto-iodide of mercury, and the various combinations used for injections and the internal treatment of gonorrhea and its sequelæ.

Narcotics, habit-producing drugs, are much better dispensed than prescribed, as they should be under the control of the practitioner. He should know how often the patient is repeating the medicine, and, in his judgment, allow or restrict the repetition. Druggists generally pay little attention to *non repetatur*, and some patients are remarkably susceptible to the seductive influences of drugs.

Pecuniarily, there are remedies which should be kept on hand, as, for instance, those drugs and combinations which are in every-day use and which keep well, as the various pills for constipation; tonics, as iron, quinia, and strychnia; the coal-tar preparations, throat lozenges, etc.

The idea that remedies kept in the office of the physician must be pills, tablets, or ready-made mixtures is only partially true. While these are the most convenient for the doctor to handle, yet many combinations may be very readily made by the physician with a few active principles, tinctures, and fluid extracts on hand.

A drug administered at once by the hand of the physician to a patient in dire distress is certainly more satisfactory to both physician and patient than a prescription written on a piece of paper. In a few minutes both physician and paper are gone, and the time of their return in doubt. In the former case the physician may have time to wait and note the action of the medicine. This has a good psychical effect at least on the patient.

Physicians practicing in proximity to reputable pharmacists are under consideration. The country doctor who has no reputable pharmacist near must necessarily keep a full line of drugs.

The general practitioner should keep on hand remedies for the relief of severe pain, emptying of the stomach and bowels quickly, antidotes to carbolic acid and a few of the more frequently used poisons. Heart stimulants, aromatic spirits of ammonia, strychnia, nitroglycerine, amyl nitrite, and alcohol are at times and under circumstances, if at hand, worth their weight in gold.



The general practitioner should neither dispense nor prescribe exclusively, but use the happy medium, doing part of each as best for both himself and patients.

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## MORPHINISM

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BY E. FORREST HAYDEN, PH. G., M. D.

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IN the sunny morning of time, God in his unlimited wisdom which enabled him to anticipate man's troubles and his needs, planned and caused to grow along the verdant banks of the Euphrates or near the Tigris, in the region of Armenia or perhaps in the fertile neighborhood and vales of Babylonia, a garden, and in that garden were sown the seeds of annuals, biennials, and perennials of beautiful and variegated hues, whose foliage he destined should be for the healing of the many ills of the various nations of the earth.

Among this gentle race a progeny of Spring, an annual — a poppy — grew, whose innate principles, with the exception of its crystalline beauty, were unknown for many centuries, or until one sad day man, by his indiscretion and transgression upon the now well known laws of hygiene, created for himself PAIN; and thereupon immediately began to seek for a means by which he might be relieved. Necessity, as it always has been, the mother of invention, at once suggested the way and method by which this could be accomplished; and this all-healing material — opium — was soon discovered by the simple incising of and obtaining the inspissated juice from the unripe capsule of the innocent poppy, or the *Papaver Somniferum*, and by extricating from it that alkaloid of repose as is so beautifully and appropriately signified by the Grecian god of sleep, as he reclines on a bed of snowy white poppy blossoms and grasps them in his inanimate hand.

The alarming story of opium using is quite as ancient as the advent of the cultivation of the poppy by the Asiatics, which first came into prominence in the early part of the sixteenth century,

when the inhabitants of Asia began to rely upon the production of opium as one of their chief industries and to claim it as a staple stimulant, which by prolonged indulgence and excessive use developed into what is now recognized as morphinism.

The way opium was used by its earlier devotees did not bring about the serious and evil consequences that result from the more modern methods of administration, or the present means of introducing it into the human body. The hypodermatic process of giving the alkaloids of opium which was brought into vogue by Cassaigne in the year 1836, but which did not become practical until it was reintroduced by Dr. Wood of Edinburgh in 1864, is directly responsible for the more disastrous effects of morphine.

This deplorable condition, which is recognized as a disease of both the body and the mind, is known as morphinism. As this disease insidiously develops, there is at the same time created within its wake an insatiable and almost irresistible craving for the drug, which feature presents the most perplexing problem in the treatment and cure of this class of patients. The majority of people place the habitual use of drugs in the light of an unpardonable, intemperate, and degrading indulgence, without considering that there is, in most instances, a factor, etiologic or otherwise, which prompts this inordinate use of drugs. In enumerating the factors of importance in the development of morphinism in the order of their frequency, we should not fail to mention physical pain and insomnia among the first. Whether as a result of disease or the acuteness of an injury, morphine is paramount to all other agents that may be employed for the relief of pain of any character, and it is at this particular point in the attempt to relieve suffering, that the imprudence and want of precaution on the part of physicians in the injection of morphine often furnishes the starting point for the downward course of a patient.

Mental agony is another credible cause for the beginning of the use of the drug, and when it is begun for the purpose of mitigating a mental strain, it is safe to say that the cure becomes more difficult than from the first causes mentioned; for the reason that mental pain, as a rule, is more lasting in its nature than are the pains due to physical defects.

Out of the great number of drug-users a large per cent. of them have become so as a result of the over indulgence in the use of alcohol, and especially when it has been taken to the extent and frequency and in such large quantities so as to no longer gratify the demon desire. It is always true of the prolonged use of alcohol that a more powerful and lasting narcotic becomes necessary to the comfort of the victim, so the hypodermic syringe and an opiate is immediately resorted to as a means of obtaining this end. While alcohol has been a formidable cause in the production of a habit even worse than whiskyism, and has been the means of precipitating want and misery in many good homes, and has brought reproach to many innocent children, and destroyed and shattered the hopes and ambition of good mothers, it is not the only type of dissipation which is responsible for the production of morphinism; for to this may be added as a cause, the tendencies common to a sensual and perverse nature, and the lovers of ease and luxury who take "dope" for the sake of the dreamy forgetfulness of care and responsibility that results from its peculiar and alluring intoxication.

Demands for extra energy to meet the exigencies of competition in a business world are often an incentive to unnatural stimulation, but these drafts upon nature are always charged up to the unfortunate drug user with compound interest. Physicians and druggists acquire morphinism because of their familiarity with the physiological effects of morphine and its therapeutic indications, which apparently is all the more inexcusable on their part; however, the addiction is always the most unexpected issue.

Whatever may have been or is the agent in the establishment of the condition of morphinism the symptoms and the results are practically the same. The physical man is wasted from anorexia, general derangement and interference with the normal functions of every important organ in the body. The mental aspect in all probability is the worst, since the mind deteriorates and becomes seriously inactive, and every one so disposed is compelled sooner or later to be set adrift morally. Contrary, however, to the burden of past experiences in the treatment of this class of patients,

we are enabled by the application of more modern and scientific principles, to readily relieve the harassing symptoms dependent upon the habitual use of morphine, and to accurately retrace the mistaken steps made by these patients and to carefully restore the wasted physical, mental, and moral strength. Every patient must be treated upon the merits of his or her individuality, which can be ascertained only by the most careful and diligent personal examination, together with continued observation.

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### IS WHISKY A VALUABLE THERAPEUTIC AGENT?

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BY W. T. MARRS, M. D., OF PEORIA HEIGHTS, ILL.

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IF we accept for the truth many articles that are now going the rounds of some of the leading medical journals we are led to believe that whisky is a good thing both in health and disease. Some of these articles are written by astute men, and they undertake to prove by scientific deductions that alcohol is a food and not a poison. It is true that these conclusions are reached by a very circuitous process of reasoning, but any thing can be proved or disproved in this way. Some learned medical man with a good portion of the alphabet at the rear of his name perhaps started the idea that alcohol is both a food and a medicine, and lesser lights have continued to re-echo the idea. Could it be that the liquor powers are back of the movement?

We all recognize that alcohol has some worth as a therapeutic agent, but we also know its limitations as such. Likewise do all physicians know above all other men the mischief it has wrought. In all ages and among all people its vices have far exceeded its virtues. To take the matter home to the profession, how many dissipated doctors can you recall as you let your memory hark back? A number, I dare say. We were only in the last few years getting the profession upon a respectable moral plane. We had about eliminated the old drunken M. D. who had to be hauled to his patient and then sobered up with hot coffee before he could render medical or surgical skill(?)

But if those who pose as our authorities are to encourage the indiscriminate use of alcoholic drinks we may soon expect the profession to lapse back into an era of dissipation.

If alcohol is a food and not a poison, why do the railroads, factories, and all business enterprises requiring skilled help, with steady nerves and clear brain, carefully exclude the fellows who partake of that which both cheers and inebriates?

This subject needs no argument when we stop to think that whisky causes the greater part of the crime, vice, want, and misery that we see about us. These are cold, hard facts and not the vaporizings of a fanatic. I have no patience with temperance twaddle; but in view of the mischief being wrought by alcohol, physicians should be very careful that they do not sow the seeds of inebriety in the younger class of patients. Let us bear in mind that, no matter who asserts the contrary, *whisky is a poison!*

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## ***Records, Recollections and Reminiscences.***

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### EXPERIENCES AS SOLDIER AND SURGEON.

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BY T. B. AMISS, M. D., OF LURAY, VA.

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*Mr. President and Members of the Association of Medical Officers of the Army and Navy of the Confederacy,*—I have the honor to submit to our Association a sketch of my experiences during the late war between the states as soldier and surgeon in the field, hospital, garrison, and Confederate States Military Prison Hospital at Salisbury, N. C.

I graduated in medicine and surgery at the University of Pennsylvania in March, 1861, returned to my home at Slate Mills, Rappahannock County, Virginia, in time to vote for the Ordinance of Secession, April 17, 1861.

At that time the people of my county were thoroughly aroused, and preparations for war were uppermost in their minds. Having received a military education at the Virginia Military

Institute, where I was a student under the immortal Stonewall Jackson, I was selected to drill the five volunteer companies from Rappahannock County. After fitting them for the field, I joined Company B, Sixth Virginia Cavalry, commanded by that high-toned, chivalrous gentleman, Captain John-Shac Green, and went with that company to Manassas. From the victorious field of Manassas our army fell back to Liberty Mills, and my regiment was left to do picket duty on the Rappahannock and the intervening territory. In April, 1862, we rejoined our brigade, commanded by the intrepid Ewell, at Liberty Mills, Virginia.

After remaining inactive in camp for a few days, I wrote to the Secretary of War for permission to join the Medical Department of the Army, was ordered to Richmond and was assigned to duty as Assistant Surgeon, Bailey's Factory Hospital, in charge of Surgeon Holliday, from Mississippi. Thus I laid aside the sabre for the scalpel and amputating knife, as best fitting me for the profession I had selected before the beginning of hostilities.

I served in this hospital during the Peninsular Campaign, and after Jackson's Corps fell back to Mechanicsville, near Gordonsville, Va., and in July, 1862, I made application to the Surgeon-General for a transfer to Jackson's Army, and he ordered me to report to Dr. Hunter McGuire, Medical Director of Jackson's Corps, Gordonsville, Virginia. Dr. McGuire was a classmate and warm friend of mine, and I shall never forget his kindness to me during my service under him. He assigned me as Assistant Surgeon, Acting Surgeon to the Thirty-first Georgia Regiment, commanded by that Christian gentleman and sterling soldier, Clement A. Evans, of Georgia, Lawton's Brigade, Ewell's Division, Jackson's Corps. I served with that regiment in all of its hard-fought battles from Cedar Mountain to the Wilderness, in May, 1864.

After the battle of Cedar Mountain in August, 1862, when our forces were falling back on Orange Court House, my regiment was the rear guard. We had not gone far before a courier came to the rear and asked for the surgeon, saying "that Dr. McGuire wanted him to look after a wounded man near the roadside." I asked this courier to guide me to the wounded man,

and with my brother, Dr. William H. Amiss, surgeon of the Sixtieth Georgia Regiment, we arrived at the roadside and found the man a few feet inside of a field. I dismounted, and going up to him, saw that his bowels were out and called back to my brother, "The only thing to do to this man is to dig a hole and put him into it." The wounded man aroused and replied, "That is what Dr. McGuire told me, but if you d - - n doctors would do something for me, I would get well." I said, "My friend, do you know that your bowels are all out and covered with hen-grass and sand." He again replied, "I had a hound dog run a mile with his guts out, and caught a fox; and I know I am as good as a dog, and can stand as much." I pulled his blanket from him, and found that he was a major. I said to my brother, "This man is full of all sorts of grit, and we will do what we can for him." I ordered my litter-bearers to carry him to a nearby farm-house, Mr. James Garnett's. We placed him on the dining table and proceeded to clean his wound, caused by a shell from the enemy's guns, which tore away the abdominal wall, crushed the bones of the hip, and narrowly missed the intestines. My brother, Dr. William H. Amiss, washed out the abdominal cavity, removing therefrom a handful of sand and vegetable matter. The point of the hip bone was broken and hanging down. This he cut off. The work was all carefully done, and the washing and sponging was done with salt solution. The sewing up of the wound, about seven inches long, was done with ordinary Boss cotton and a calico needle. The wounded man was Major Snowden Andrews, of the Maryland Artillery, and later became Commander-in-Chief of the army of the Khedive of Egypt. His home was in Baltimore, where he died a few years ago. This remarkable case is reported in Holmes' Surgery, Vol. III, page 499, accrediting the operation to Doctors *Amus* and Wall, of Virginia, which should have been Dr. William H. Amiss, assisted by his brother, Dr. T. B. Amiss, as Major Andrews afterward testified.

The notoriety of this recovery was freely discussed by the medical fraternity of London just before the breaking out of the Franco-Prussian War, and it was suggested that the recovery was due to dust from the roadside, which had completely settled over the wound, and careful surgery afterwards.

The dust treatment was practiced in the Franco-Prussian War, and this in turn suggested the use of antiseptic powders in wound treatment.

After the battle of the Wilderness, in May, 1864, I went home on an indefinite furlough to die of chronic dysentery, but the change of life, diet, salt and vinegar, and good nursing by my wife, caused me to recover.

In the fall of 1864 I determined to re-enter the service, and reported to the Surgeon-General in Richmond for hospital duty. He ordered me to report to Dr. Johns, Medical Director, Raleigh, North Carolina, which I did, and was told that there was no vacancy there and the best he could do for me was to send me to Salisbury, N. C., to help take care of "The Pet Lambs" (30,000 prisoners). I reported to Dr. Curry, Surgeon-in-Charge of the C. S. Military Hospital, Salisbury, N. C., entering upon my duties as Assistant Surgeon with Drs. Boyd and Manning, of Virginia, and served until the garrison was removed to Andersonville.

There has been a great deal said and written about our starving the Yankee prisoners which is false. They received the same kind of rations that we did.

On November 14, 1864, I was transferred to Weldon, N. C., and ordered to report to Captain Webb, who had charge of the fortifications at that point, and also a battalion of light artillery. I served as surgeon with Captain Webb. When General Butler, with his ironclads, attacked Wilmington, our battery was ordered to that point to assist in its protection. We sank two of Butler's gunboats, crippled another, and captured 300 marines which Butler had landed. This was in the latter part of December, 1864. After this battle we returned to our fortifications at Weldon, where I remained until Lee's surrender. When the news of Lee's surrender reached us, we destroyed the fortifications around Weldon, burnt the bridge across the Roanoke River, and endeavored to join Johnson's army around Greensboro, N. C. We were cut off by Sheridan's cavalry, and General Baker disbanded his army, giving me the following order:—

“Headquarters Second Military District,

“Department of North Carolina,

“Ridgeway, April 16, 1865.



"Assistant Surgeon T. B. Amiss, P. A. C. S., is relieved from duty with Webb's Battery, and will report to the Chief Surgeon, Army of Tennessee. If he finds it impracticable to do this, he will return to his home in Virginia.

"By order of Brigadier-General Baker,  
"J. C. McRAE, A. A. G."

Finding it impracticable to join the Army of Tennessee or any other organized Confederate force, I, with Sergeant Chandler, of Shenandoah County, Virginia (the only man in my command from Virginia), started for home in my ambulance, drawn by two good mules. When nearing Burkesville, Va., we encountered a squadron of cavalry, and were taken to Grant's headquarters, where we were parolled by General Meade, who treated us with great courtesy, and advised us to remain within his lines, as there was great excitement on account of the assassination of Lincoln, and his negro troops might do us harm. I asked the General's permission to be quartered at the General Hospital, which was readily granted, and there I drank my first cup of sure-enough coffee, sweetened with sure-enough sugar, since 1861.

We were detained in this camp three days, and then wended our way homeward. While in camp I saw more negroes than I ever saw before in my life. Without further incident, except for occasional halts by the pickets of the Yankee army, I reached my home in Slate Mills, Rappahannock County, Virginia, the latter part of April, 1865, where, according to my parole, I have lived a peaceable citizen, having never been exchanged nor have I taken the "Iron-Clad Oath."

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THE NEED OF EARLIER DIAGNOSIS.—J. N. Hall, of Denver, emphasizes the fact that early diagnosis in many diseases is of quite as much importance as accurate diagnosis. By waiting for a complete picture of the condition existing we may sacrifice the chance of the patient for his life. We must be more prepared to assume the responsibility of tentative diagnosis. The author cites as examples early tuberculosis, diphtheria of the larynx, empyema, and many abdominal conditions. Among these are gall-stones, gastric ulcer, and appendicitis, in which exploration will end in cure.—*Medical Record*, Aug. 3, 1907.

## Selected Articles

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### GOITER: ITS SURGICAL TREATMENT.\*

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BY C. H. MAYO, A. M., M. D., ROCHESTER, MINN.

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THE thyroid gland shows very early in the development of the embryo. It is formed from three areas or buds, two lateral and one median. The median bud develops between the two halves of the tongue and invaginates, extending down the neck as a tube, the thyro-glossal duct. The fifth week the developing hyoid bone crosses the line of the duct; then the upper portion is obliterated, leaving an opening at the back of the tongue — the foramen cæcum. The lower portion forms the upper poles, isthmus and also pyramidal lobe when it is present. The seventh week sees the portion united with the lower poles, which develop from lateral buds in the fourth branchial cleft. At times the median portion does not descend, but remains in the tongue, developing a tumor known as a lingual thyroid. In the vertebrates the union of the various sections of the thyroid does not occur, and this to some extent is not an infrequent anomaly in man.

Accessory thyroids are also seen at times in the lines of the original areas of development. The thymus gland is formed from buds in the third branchial groove and passes downward in development to rest beneath the sternal notch.

The united gland is somewhat the shape of a horseshoe, the concave border being up. It rests upon the front and sides of the trachea, to which it is firmly attached. The thyroid is inclosed by a fibrous capsule, which also aids in fixing the organ to the thyroid cartilage and tracheal rings. The capsule which covers the gland divides behind in such a manner that it not only covers the gland posteriorly, but also passes behind and between the esophagus and trachea to unite with similar structures upon the opposite side. With such encapsulation we can readily see how the growth of the gland or the development of tumors within its tissue may cause serious pressure and distortion of the structures

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\* Read before the Ohio State Medical Association, Cedar Point, 1907.

in immediate relation to it. The weight of the gland in the healthy adult is from one to one and a half ounces.

The function of the thyroid is a complex one. Among the various functions of the gland are its dilating effects upon the capillaries. In over-absorption the metabolism of the body is often affected, causing a loss of weight. Thus in the obese feeding the gland is a remedy to reduce overweight. Over-secretion causes a warmth of the skin, redness, and excessive sweating. Tachycardia is developed also from overfeeding of the gland secretion, one cause being from the large proportion of blood in the capillaries.

Parathyroids, discovered by Sandstrom in 1880, were supposed to be accessory thyroids, until 1897, when it was shown that they were most important structures, having a separate function from the thyroid and seemingly to control to a great extent the nervous system. In later life they are apparently more important than the thyroid, as their removal causes death from tetany. The loss of the thyroid can be to a great extent supplied by feeding the gland, but feeding parathyroid is not successful for tetany. Experimental work is now being conducted to develop parathyroid serum.

Hypothyroidism, or loss of function of the gland, the opposite condition from hyperthyroidism as occurring in exophthalmic goiter, we see in myxedema, in which the opposite conditions also prevail—harsh, dry, thick skin, with open pores, development of fatty deposits in pads over the shoulders and clavicles, broadening of features and change of facial expression, while general dullness or sluggishness of intellect and increase of weight are common. The mother's thyroid causing an internal secretion has much to do with the fetal capillary circulation. A child born without a healthy thyroid fails to properly develop either mentally or physically. The secretion of the suprarenal capsule unopposed apparently serves to restrict all capillary growth and nutrition to the brain cortex, as well as to the rest of the body. Such cretins often make wonderful progress from the transplanting of the thyroid tissue or from feeding the same.

The thyroglobulin of the thyroid is not destroyed by gastric

juice or even by boiling in ten per cent. sulphuric acid solution.

Simple goiter or thyrocele is a most common occurrence in girls at puberty. The development is seldom excessive and usually subsides unless there be an encapsulated growth in the gland, which becomes manifest from the increased circulation. These cases without an encapsulated tumor rarely require active treatment and usually are of but a few months' or years' duration.

The second period of the development of goiter is during pregnancy. In fact, a moderate enlargement of the gland is one of the favorable signs of pregnancy. Lange has shown that if the gland is not enlarged in the pregnant woman she will have a tendency to albuminuria. This connection of the thyroid with the generative organs in the female is well marked, as diseased conditions of the generative organs are commonly out of proportion to those possessing goiter, while it is often noted that women have a temporary enlargement just previous to or during menstruation.

*Hemorrhage.*—Some cases of sudden development of thyroid tumors accompanied by great pressure and suffocating symptoms are due to hemorrhage into the gland. In these cases early incision may be required.

Septic conditions affecting the thyroid are rare. The pneumococcus is one of the more common organisms found and is transmitted by the blood stream. Free incision is demanded for relief. Still less commonly seen are tuberculosis, actinomycosis, or hydatid infection.

Those thyroids which present small nodules, or median smooth and rounded tumors, or in which the natural contour of the gland is lost in the development of the rounded tumor are practically always encapsulated tumors of fetal origin, or fetal rest tumors of embryonic thyroid tissue, or adenoma, some with cystic change.

Those goiters which develop more in accordance with the normal shape of the gland are more commonly known as diffused colloid or diffused adenomata, while those with larger retention accumulations of colloid, with irregular contour, are often called follicular goiter, the only capsule being that of the gland.

We employ the term hyperthyroidism because it expresses the

true conditions far better than the terms more commonly used, *viz*, Graves' disease, Basedow's disease, Parry's disease, or exophthalmic goiter.

The leading symptoms of the disease are the increased frequency of the pulse, muscular tremor, enlargement of the gland, exophthalmus and general nervousness. In mild cases one or more of the prominent symptoms may be absent, while in severe cases all may be present as well as gastric crisis and diarrhea.

The circulatory change is an increased frequency of the heart action and is similar to that produced by violent exercise, as is also the muscular tremor. There is such a large proportion of blood in the dilated capillary system that the heart fails in its effort at maintaining circulation because of its lack of material. Remedies which cause contraction of the capillaries will often cause a marked reduction in the rapidity of the circulation. The thyroid gland may be enlarged to a great extent, yet many cases may show no enlargement to palpation.

Exophthalmus, which exists in about eighty per cent. of the cases, is the most marked feature when present. Von Graefe's symptom is a lagging behind of the upper lid in looking downward. Stellwag noted the retraction of the upper lid as increasing the width of the palpebral fissure, which causes the sclera to show above the cornea. Moebius noted a weakness of convergence in looking at near objects. Diplopia, complete immobility, edema of the eyelids, and even total protrusion of the eyeballs with dislocation from between the lids, have been noted.

To those of us who have been on the firing line, so to speak, of the surgical side of this subject, it is extremely gratifying finally to see the disease placed upon a scientific basis of cause and effect. For many years the varieties of treatment, or the remedies used for Graves' disease, were only exceeded in number by the number in use as cures for *tic douloureux*. These methods were rarely based upon other than empirical statements that they seemed good for or that they improved an individual case or two.

The more recent attempts at relief by serum therapy appear to be based upon good reasoning, and when properly employed have in selected cases given satisfactory results.

Operative treatment of goiters in general has in the past been placed under a ban. It was considered an operation to be undertaken only under dire necessity, and naturally a last resort operation was accompanied by a high mortality. The main points impressed upon students were the reasons for not operating, and the patients were also informed that some hideous skin disease might follow, or of a surety that they would become "fistulous" should the goiter be removed and they survive the operation. Under these circumstances surgical treatment was advised only for patients who were exhausted by their disease or by the treatment they had received, and thus surgical aid was given only to those cases who persisted in failing in spite of all methods of treatment. Very often moribund cases were operated upon as a *dernier resort*, and, as is usual in the progress of medicine, failures of this kind result in abandonment of development of methods, or in improvement in diagnosis, choice of and preparation of patients, until to-day we have presented to us in a large series of cases the wonderfully low mortality of two or three per cent., with all cases relieved and most of them cured.

The statistics of the Kochers, who have long led the world in goiter surgery, report some 250 cases of hyperthyroidism surgically treated. Other operators present a large number of cases, though smaller than the Kochers, and in considering these statistics I say again that it is extremely gratifying to know that we have accepted the fact that there is a similar change in the thyroid—either in part or in whole of the gland in hyperthyroidism. Practically it is a "work" hypertrophy and cannot be distinguished from such conditions when experimentally produced. Hunt's biological experiments show an increased quantity of iodine in the blood.

Some are manifest cases of hyperthyroidism merely upon observation. Others have the ocular changes most prominent. Again, we have no eye symptoms, but a goiter pressure, while some well marked cases of the disease have no eye symptoms and no enlargement of the thyroid manifest to palpation, yet the thyroid is enlarged and has the cell changes common to the gland in this disease.

We consider four types of the disease, three regular and one pseudo.

First, the soft vascular pulsating thyroid with symptoms of hyperthyroidism.

Second, the hard, dry gland of hyperthyroidism, or usual type.

Third, the development of hyperthyroidism in those with pre-existing goiter, in whom we find changes of solid tissue, loss of colloid and vessicles filled with columnar cuboidal cells in scattered areas, instead of a general change in the gland, as in the first two types.

Fourth, pseudo hyperthyroidism, in which we have those who by reason of the growth of a tumor, such as an encapsulated adenoma in the gland, suffer from excessive absorption of their own gland, which occurs at irregular intervals. Such cases may suffer from all the ordinary changes of hyperthyroidism for short periods, but they seldom develop exophthalmus. The last named variety is often overlooked in securing histories of individuals with encapsulated goiters.

Inasmuch as many cases of hyperthyroidism recover without treatment and others in spite of treatment, it is perfectly justifiable for physicians to institute treatment on any line, plan, or system which they believe proper. The mistake in the past has been to persist in the belief that some particular drug or treatment would eventually be successful in spite of the downward progress of the patient, thus withholding surgical aid until of necessity the surgical mortality represents also in part what should properly be medical. On the other hand, the surgeon should not accept these cases for operation until all the conditions are as favorable as possible for the recovery of the patient. One of the great dangers of the operation is from myocardial change, usually shown by uneven tension and irregularity in the pulse. No patient should be operated upon whose pulse cannot be counted continuously because of uneven tension. Gastric crisis or diarrhea should also lead to the postponement of operation. Ascites and edema of the feet and hands are contraindications. All of the foregoing contraindications may usually with suitable treatment be overcome. The Kochers in these cases ligate one or more ves-

sels of supply (under cocaine), according to the case, reserving extirpation of the gland for a later period.

We have used belladonna extract with quinine internally, and in certain cases the X-ray is applied over the gland for as many times as is sufficient to discolor or even burn the skin. This treatment is given until the general condition improves and the operation is considered safe. The improvement under Roentgen ray may be most marked for a time, but it is seldom a lasting one.

The anesthetic of choice is ether. Very rarely indeed do we find it necessary to use cocaine. The etherization is preceded twenty or thirty minutes by a hypodermic of one sixth grain of morphia to allay the nervous restlessness and lessen the necessity of profound anesthesia. With the morphia is given 1-120th of a grain of atropin to relieve the tracheal mucus which may result from the ether, as well as the tracheal trauma, and it also stimulates the respiration.

The patient is placed in the reverse Trendelenberg posture, which by gravity tends to relieve the upper portion of the body of blood. The incision is the transverse collar and includes the skin and myoid muscle. The dissection of these structures, held together, is carried down to the sternum and up to the top of the thyroid cartilage: the sternohyoid and thyroid muscles are separated in the midline to expose the gland. This separation may be sufficient in small tumors to permit the delivery of the gland, but often it will be necessary to cut across the group on the side removed to secure a safe working field. They are incised near their upper insertion to avoid injury to their nerve supply and re-sutured at the close of the operation. This also breaks the continuous penetrating scar. The posterior capsule of the gland is brushed back with gauze as the gland is elevated; the superior and inferior thyroid arteries are ligated as they enter the gland through the capsule. At times this artery may be ligated farther out if seen in the dissection.

Preserving the posterior capsule tends to prevent injury to the parathyroids which rest behind the intimate capsule of the gland, the injury or removal of which we now know may cause tetany. This also preserves the recurrent laryngeal nerve. In



490 operations for goiter we have seen but one very mild case of tetany of a temporary nature following this method of procedure. Great care must be exercised in ligating the superior thyroid, as a considerable proportion of the deaths following an apparently successful operation are from hemorrhage. This hemorrhage is usually due to the including of some fibers of the omohyoid muscle in the ligature, which may be dislodged with movements of the neck.

The isthmus is ligated, the wound area burned with carbolic acid and alcohol neutralization or washed with Harrington's No. 9 solution.

*Harrington's Solution:* Alcohol, 640 parts; water, 300 parts; hydrochloric acid, 60 parts; bichloride, 8 parts.

This solution serves to also wash the wound area with serum and inhibits lymphatic absorption. Following this, free drainage is instituted through a separate incision. The patients are given large saline enemata under slight pressure. If not retained, they are given saline subcutaneously. This is repeated several times within the first thirty-six hours. Should excessive sweating occur, atropin is administered. Morphia is given to diminish excessive restlessness. If there is considerable serous discharge in severe cases, or even if there is no discharge, hot moist boric acid dressings are applied over the front of the neck. The drains are left from two to three days, according to their apparent utility. The deaths which occur will usually be within twenty hours.

The general nervous restlessness and tremor subsides to a remarkable degree within two days. The pulse may remain from 120 to 170 beats for two days, but drops suddenly on the third day about twenty to thirty beats and is usually 80 or 110 within six days. The temperature may be elevated two or three degrees for two days following operation, when it drops with the pulse.

If the exophthalmus is marked, it will not entirely disappear after operation, but will be greatly improved. Many cases only partially relieved of their symptoms are in no sense a discredit to the surgical method practiced, but merely show that not sufficient gland tissue has been removed. These cases should be reoperated upon and more of the gland extirpated. We were greatly pleased with the result in four cases in which this was done.

After operation these patients are seldom confined to the bed more than three days and are commonly out of the hospital within a week. Practically all cases are improved over their former condition, and most of them are cured. The mortality is constantly decreasing. There were four deaths in the first sixteen cases, three in the next thirty, and but three in the last 150 cases.

In operating upon encapsulated tumors in the thyroid we have the work well outlined for us by the conditions present. An encapsulated tumor of the gland is not supplying the system with thyroid secretions; therefore its removal is an advantage in preventing the destruction of the real thyroid. The more nearly the surgeon can enucleate the growth without destroying or removing the thyroid the more surely will there be only favorable results following the operation. Even enormous cysts should be enucleated, preserving what little thyroid there may still be in the capsule. Unless these tumors are very large and much traumatic serum is expected, drainage is not necessary.

Sarcoma and cancer are most serious changes to occur in the gland. Such conditions are usually operated upon too late to give other than a high mortality and but few permanent cures. While the tracheal pressure is lateral in benign growths, we have noticed that it is the anterior rings which are softened by malignancy. The mortality from benign tumors is very low, practically being accidental, from pneumonia, hemorrhage, or sepsis. — *Reprinted from Ohio State Medical Journal, October, 1907.*

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## Editorial.

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### BUBONIC PLAGUE AT THE GOLDEN GATE.

DURING the past few weeks, having had a number of inquiries as to the invasion of San Francisco by "*Pestis Orientalis*," "*Pestis Bubonis*," or "*Bubonic Plague*," the following is submitted from the latest advices we could secure, and which we regarded as authentic:—

The first case occurred May 27, ult., in the person of Oscar Tomer, on the tug "Wizzard," and who died between three and four days after. No other case appeared until August 12, when one case was reported; on August 13, three cases; August 16, one case; 26th, one; 27th, two; 31st,

five; September 2, three; 9th, three; 10th, one; a total of 21 cases, with nine deaths. By September 16, six more cases had been observed; by September 21, eight more cases; and under date of September 24, the following bulletin was issued over the signatures of Rupert Blue, M. D., Passed Assistant Surgeon P. H. & M. H. S., and Wm. Orphuls, M. D., President of the Board of Health:—

"There have been 42 verified cases of bubonic plague since May 27, 1907; of these 24 have died.

"From our knowledge of the plague the prevention of a sudden outbreak in epidemic form can be predicted with assurance. But a certain number of cases will occur for a considerable period in spite of all preventive measures."

Dr. Blue subsequently reports as follows to the Surgeon-General of the P. H. & M. H. S:—

"September 27. Total cases to date, 46; deaths, 27.

"September 30. Cases to date, 49; deaths, 27.

"October 3. Plague record to date, 51 cases; 30 deaths.

"October 4. Record to date, 54 cases; 30 deaths.

"October 8. Cases to date, 58; deaths, 33.

"October 9. Record of plague at Oakland, 3 cases, 3 deaths.

"October 13. Plague to date, 65 cases; deaths, 38."

"October 19. Plague cases to date, 70; deaths, 43.

So far the mortality has reached but a small fraction over fifty per cent. No cases until October 9 had been reported outside of San Francisco, although it was said that one death occurred in Berkeley and one at San Jose, and two infected rats were reported by Dr. Blue as being found in Oakland October 2.

Active steps are being and have been taken by local, state, and national health authorities for suppression and protection, and although other cases will occur, yet we fully believe that it will be eventually controlled. President Roosevelt submitted the following on September 6, to Surgeon-General Wyman:—

"In view of existing sanitary conditions, it is desired that the Federal Government assume immediate charge of measures necessary to eradicate and prevent the spread of bubonic plague in San Francisco. The city will do its utmost to furnish funds to pay for material and labor. It is requested that the Public Health and Marine Hospital Service furnish a sufficient number of medical officers."

The city of San Francisco has been divided into twelve sanitary districts, with one special medical inspector, two special sanitary inspectors, and twenty-four rat-catchers for each; and the old Board of Health having resigned September 8, the mayor appointed a new board consisting of Dr. Wm. Orphuls, President; and Drs. T. G. McConkey, G. E. Manning, G. D. Tait, and T. W. Huntington, who will carry out the measures advised by Kitasato of Japan. Rats will be destroyed by poisoning and

trapping; and the flea will command his share of attention, as according to modern science the infection is also spread by them.

The following is the concluding extract from an order issued by the Board of Health:—

"It is perfectly evident that in this rat crusade there must be a general co-operation, if it is to be at all effective. Warehouses, stables, restaurants, and such places which are known to be their favorite haunts and breeding places must be cleared at once of these pests. Householders also should see to the destruction of all rats and the removal of their breeding places so far as possible. A safe poison consists of equal parts of flour, oatmeal, and plaster of Paris, which they readily devour when hungry. A pan of water should be placed near the poison. All rats found should be made safe at once by placing in kerosene or better by burning. Under no condition should the reprehensible habit of throwing them on the street be tolerated.

"All the vessels plying between San Francisco and other state ports will be thoroughly fumigated. All vessels will be thoroughly examined for the purpose of killing all rats, mice, and insects. All the city and county buildings will be thoroughly fumigated and freed from rats."

Early in the war of rat extermination a bounty of ten cents was offered by the Board of Health for each rat, which was subsequently reduced to five cents, as that was the price offered in Oakland, and it was thought that the youngsters of Oakland would bring their captures over to San Francisco to secure the higher bounty.

Among the cases reported in August was that of Dr. C. Jones, and Mary S. Keating, both residents of the city, and one the interne or resident physician, and the other a nurse at the City and County Hospital, both reported recovering. The former submitted early to the removal of the infected inguinal glands.

As but few if any of our readers have had any practical experience with this disease, we place before them the following "abstract" from the latest edition of French's "Practice" (just issued from the press of Messrs. Wm. Wood & Co.), prepared by Dr. Frederic Roberts of this city. We will state, however, in connection with treatment, that the latest edition of Tyson's "Practice" has the following: "Small animals have been rescued from infection by plague germs by Yersin's serum, but in human beings the results have been less conclusive, Arnold\* claiming that it reduced the mortality of cases seventy to ninety per cent., while Cremow\*\* denies any therapeutic value.

"The plague is a disease of the Orient, where it has prevailed from antiquity. Among the most notable pandemics in history were the Jus-

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\* W. L. Arnold, M. D., Surgeon U. S. N. (retired), formerly of this city, in *Medical News*, Jan. 1, 1898.

\*\* *London Lancet*, May 6, 1899.

tinian plague of the sixth century, which lasted sixty years and destroyed half the population of the Eastern Empire; the 'black death' of the fourteenth century; the plague of Naples in 1656, that destroyed 300,000; and that of London in 1664-65, in which 68,000 perished. The numerous epidemics that have occurred in different parts of the world since the apparent rejuvenation of the disease at Hong Kong in 1894, and more particularly its repeated prevalence in the Philippine Islands, its outbreak in Hawaii in 1899 and importation to San Francisco in 1900, where it persisted for two years, have given the disease an importance to American physicians which it did not before possess. The specific bacillus was discovered by Kitasato in 1894, and its relation to the disease has since been fully confirmed by Yersin and many others.

"The plague is an exceedingly virulent, infectious disease, which runs a rapid, febrile course, characterized by glandular swellings in different parts of the body, or a pneumonia and a tendency to hemorrhage from mucous membranes. There are three more or less recognizable forms of the infection: the glandular, the pneumonic, and the septicemic.

"The most potent etiological factor is the bacillus pestis of Kitasato, which is a short rod-shaped bacillus with rounded ends which stain deeply. It is found constantly in the body after death, especially in the viscera, blood, and enlarged glands; also in the blood, urine, and feces, and in the sputum in pneumonic cases, during life.

"The usual avenues of entrance into the body are the skin and mucous membranes of the respiratory tract. Accidental infection has occurred in post-mortem rooms and bacteriological laboratories. The tonsil is believed by some to be an avenue of infection. Among the lower animals which are very susceptible to infection are sheep, calves, pigs, pigeons, hens, turkeys, ducks, geese, rats, mice, and bats. Rats are most dangerous with reference to perpetuation and spread of the disease, as they are probably the most constant carriers of it to distant countries. Fleas, lice, and bedbugs may be classed with the rats in regard to the perpetuation of it and the spread of infection to man. The disease is very rare among domestic animals. The usual run of events in the outbreak of an epidemic is: (1) The arrival of infected rats from some point where the disease is prevalent; (2) infection of the fleas which feed upon the rats; (3) death of rats and scatterment of fleas to other rats and mankind, and (4) inoculation of persons bitten by infected fleas. The predisposing factors are filth, deficient ventilation, and over crowding. Age, sex, and occupation exert little influence, except as they modify exposure. Infection is favored by warm weather and humidity of the atmosphere, but outbreaks sometimes occur in winter.

There are three clinical forms: (1) The bubonic form, a glandular type, pestis major, or the ordinary form of the disease, embracing fully seventy-five per cent. of the cases; (2) a pneumonic form, in which the

respiratory organs are mostly affected, and (3) a septicemic form, a rapidly fatal type of disease.

The incubation period lasts from two to fifteen days, oftenest two to five, during which the patient may complain of a slight indisposition, especially for the last day or so of this time they complain of headache, pain in the back and limbs, languor, vertigo with a staggering gait, nausea, vomiting, and in some cases epistaxis. Exceptionally we may have a chill, but most often the invasion begins with a rapid rise of temperature to  $103^{\circ}$  to  $105^{\circ}$ ; pulse rate rises to 120 to 150 and respiration is quickened. The headache, nausea, and vomiting become more severe and an intense thirst develops, as does the enlargement of the lymph glands in one or more regions. The face is flushed and the hearing becomes dull. The tongue is swollen and is covered with a creamy fur which turns black and sordes form on the teeth and lips. The prostration becomes profound and the voice is inaudible. There is a trace of albumin in the urine, which may become scanty or you may find retention. Either constipation or diarrhea may exist. Coma or tetanoid convulsions may develop. The pulse becomes weak and rapid, sometimes dicrotic and intermittent. The heart may dilate, in which case marked cyanosis is present. In cases which recover the fever subsides, followed by sweating, the pulse grows fuller and stronger, the tongue clears, and the other symptoms abate. However, the bubo remains and continues to enlarge until it bursts unless it is incised beforehand. Convalescence is usually rapid. It is usually on the third or fourth day that the glandular enlargement is noticed, and then it is found to affect the femoral glands first in nearly seventy per cent. of cases, most frequently on the right side; the axillary glands are primarily affected in about twenty per cent. of cases, and the submaxillary glands in ten per cent., mostly in children. The swelling varies from the size of a walnut to that of a goose egg, and is extremely painful and tender. Dyspnea and venous obstruction occur when cervical glands are affected.

In the pneumonic form, which is most frequently seen in children, the invasion begins with a chill, pain in the side, headache, high fever, cough, and rapid respiration, and on physical examination scattered areas of pulmonary consolidation are found. The sputum is fluid, watery, and very bloody. This form is nearly always fatal in from one to five days.

In cases of a septicemic character the indications all point to a severe and rapidly fatal septicemia, which generally terminates in death within three days, even before glandular enlargement has become recognizable. Marked tenderness may be found over all lymph glands in the body, and frequently there are hemorrhages into the skin and mucous membranes.

The chief element of danger is the intense bacillemia and the resultant thrombosis of vessels, hemorrhages, high fever, sepsis, or pneumonia. A great deal depends on the age, physical conditions, and the nursing the

patient receives. Persistent vomiting, hyperpyrexia, delirium, and hemorrhages are unfavorable symptoms. The mortality is highest at the height of the epidemic, and the general death rate ranges between seventy and ninety per cent.

All prophylactic measures should be employed just as in any other infectious disease. Physicians and nurses should be extremely careful when there are wounds or abrasions on their fingers. The dejecta, sputum, and all discharges from the patient should be thoroughly disinfected and disposed of in such a manner as not to become a source of infection to rats, fowls, or other animals.

More complete protection may be gained by inoculation with Haffkine's serum or some of its modifications by Yersin, Lustig, and others, which consist of sterilized bouillon cultures of the bacillus pestis. Although these serums do not afford complete immunity, the disease has proved less virulent after their use.

The treatment is mainly supportive and symptomatic. It should begin with a calomel purge followed by a saline, so as to prepare the stomach for much needed nutriment, also to prevent vomiting, which if it does not do, should be treated with continued small doses of calomel, chipped ice, mustard plaster to epigastrium, or three-drop doses of dilute hydrocyanic acid or aromatic spirit of ammonia. For headache and fever apply ice-bags to head and neck, but do not resort to depressant antipyretics. Morphine, hypodermatically, may be necessary for pain. A nourishing liquid diet and brandy should be given to maintain the strength of patient. Strychnine should be used to support the heart from the start. Cold sponging may be used for reduction of temperature. Suppuration should be encouraged by the application of hot fomentations and poultices.

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#### MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE SOUTH—ANNUAL COMMENCEMENT EXERCISES.

THE regular commencement of the Med. Dept. of the Univ. of the South was held in St. Augustine's Chapel at Sewanee on Thursday, Oct. 25, the entire student body and a large number of citizens and friends of the graduates being present.

After the opening services the Dean, Prof. Jno. S. Cain, M. D., made a few practical remarks, together with the usual announcement for the next term.

Diplomas from the Training School for Nurses were presented to Miss Louise Griffen, La.; and Miss Ruby Guillette, Ala.

The degree of Doctor of Medicine was conferred on the following graduates in the Medical Department:—

- J. F. Bell, Grafton Burke, and L. P. Brooks, Tenn.; J. D. Chunn, Ala.; T. J. Caldwell, Texas; J. G. Gaither, Ky.; S. S. Garrett, Ala.; L. A.



Hankins, Texas; J. N. Hankins, Ala.; C. A. Hiriart, La.; I. K. Hicks, La.; Ahmed Khaled, B. S., Egypt; W. W. Lightfoot, Miss.; J. H. Morford, Pa.; J. R. McMichael, Ga.; J. D. Noll, Ala.; L. D. Nolen, Ala.; J. W. Nickson, Ind. Ter.; W. B. Putman, Ala.; J. N. Robson, Ph. G., S. C.; G. R. Seikel, N. J.; H. C. Sharp, Ga.; J. H. Schofield, Va.; J. C. Stone, Ga.; B. G. Swanson, Ga.; B. M. Tison, Fla.; J. B. Webb, Va.; K. B. Williams, Ph. G., Ala.; R. N. S. Young, Miss.

The following are those who compose the class in pharmacy who received degrees:—

C. Sterling, Texas; J. W. Williams, Ala.; J. C. Stone, Ga.; W. K. Weems, Texas; J. H. Morford, Pa.; Joseph Whitaker, Tenn.

After these degrees had been duly conferred the honor medal for highest class standing was awarded to Dr. J. Gant Gaither of Kentucky.

A splendid and eloquent "Charge to the Graduating Classes" was then delivered by the Rev. Dr. Hudson Stuck; and the "Valedictory Address" was delivered by Dr. Grafton Burke, of Texas.

#### THE MIDDLE TENNESSEE MEDICAL ASSOCIATION.

THIS active, practical, and progressive organization will hold its regular semi-annual meeting in this city, Nov. 21 and 22, and all who can possibly do so will do well to attend. The officers of the association are Richard Douglas, M. D., of Nashville, President; E. H. Jones, M. D., of Murfreesboro, Vice-President; and Wm. Litterer, M. D., of Nashville, Secretary and Treasurer. The address of the president, Dr. Douglas, will be delivered on the evening of the first day's session, its subject being "The Cancer Problem." Papers have been promised by Drs. E. H. Jones, L. L. Neblett, L. B. Graddy, Wm. Litterer, R. A. Barr, Wm. McCabe, Hazle Padgett, W. C. Dixon, A. L. Sharber, G. E. Vaughn, and others.

The following circular letter has been sent out by the Secretary:—

November 1, 1907.

DEAR DOCTOR,—The Middle Tennessee Medical Association, which meets at Nashville, November 21 and 22, 1907, extends to you a most cordial welcome.

Membership is open to all regular physicians in good standing, so kindly lend your influence in bringing new members with you.

These meetings are always looked forward to with keen anticipation, as they are scientifically interesting and socially delightful. Too often we feel we are too busy to come, but the majority of those who regularly attend include the busiest and hardest working men in our Association.

The number and quality of the papers already at hand forecast the most successful of all our meetings, and any one who fails to come will miss a rich treat indeed.



All details as to arrangements will be announced in the regular program, which will be issued in about two weeks' time. If you care to present your views to the Association, kindly send title at your earliest convenience.

Hoping to have the pleasure of meeting you at Nashville, we beg to remain.

Very truly,

WM. LITTERER, M. D., *Sec'y and Treas.*

MEATOX, THE NEW CONCENTRATED FOOD.—In our excellent contemporary, the *Philadelphia Medical Bulletin*, for September, we find a very complete analysis, together with a report of "Physiological Experiments" on this preparation by I. V. S. Stanislaus, B. Sc., Pharm. D., Dean of the Dept. of Pharmacy in the Medico-Chirurgical College of Philadelphia. The analysis is as follows:—

"Upon analysis of a sample of Meatox it was found to be composed of the following ingredients and proportions:—

" Moisture .....	4.80
" Celery Flavoring (residue from alcohol extract).....	2.21
" Sodium chlorid .....	4.56
" Proteid matter .....	73.54
" Insoluble matter .....	9.43
<hr/>	
" Total .....	94.54
" Ash .....	4.96
<hr/>	
	99.50
" Loss .....	.50
<hr/>	
	100.00

To this we take pleasure in adding these extracts from the article:—

" Submitting the inclosed analysis I take pleasure in stating that basing it on the protein content this is the most wonderful exponent of the modern nutrients extant. It is practically five times the meat value as a food, and as such will command the attention of every physiologist and hygienist interested in food products."

\* \* \* \* \*

"The effect on blood-pressure in the human subject was noted. A man was fed on Meatox, bread and butter, water, a little hot tea without milk, and fruits and berries with a little sugar for ten days. Blood-pressure was estimated with a Rivi-Rocci sphygmomanometer, the systolic pressure only being recorded. Before starting in on the Meatox diet, the

radial systolic pressure was 115 millimeters of mercury, while at the close of the diet the radial systolic pressure was 118 millimeters of mercury."

\* \* \* \* \*

"The above deductions convince that Meatox as a concentrated food is an easily digested, assimilated, and sustaining condiment. It is the first in the field of foods as a true, highly-organized proteid food."

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PHARMACISTS AND PHYSICIANS.—For the last few years pharmacists and physicians, working hand in hand, have set themselves to change some of their mutual errors and mistakes of the past. It lies not in the mouth of the physician to reproach the pharmacist, nor in the mouth of the pharmacist to reproach the physician. We have erred mutually, we have erred together, and we are determined to redeem ourselves together. The mere trade in patent medicines, in frauds and fakes, the deceits of all kinds, need not concern us. There are crimes outside of the ranks of medicine and outside of the ranks of pharmacy, and we are not starting off on a general reform expedition. There are other organizations and other agencies for that purpose, but the movement to make the drugs—whether the product of the manufacturing houses or the product of the individual pharmacist—which are dispensed over the counter, upon our prescriptions, what they purport to be is one in which you and we have a common interest, and in which our patients have the greatest interest of all. I recognize and you recognize—we must recognize—that in the general progress of science and the general advance of discovery, and the general progress of the arts of manufacturing and preparation of crude pharmaceuticals there is abundant room for large manufacturing houses which devote themselves to specialties of various kinds.

For example, how can the individual pharmacist undertake to prepare and supply the great group of animal extracts and serums, which now have such a large part in the therapeutics of to-day? And so even with various galenicals, alkaloids, and the like. There are many things which the retail pharmacist cannot do as well as that establishment which possesses the proper facilities and which is thoroughly organized to do well on a large scale what can only be done imperfectly on a small scale. We all recognize that, and the American Medical Association has taken steps, individual physicians have taken steps, to place themselves in proper relation with the great manufacturing houses, which are a credit to American pharmacy and to American business. We want to have the most cordial relations with them, so that these firms may be encouraged to prepare and offer to us for the benefit of our patients, the best and purest and most definite pharmaceutical products. And yet, after all, there is a place, and there must be a place always for the individual pharmacist or retail druggist, call him by whatever name you please; for the individual

who practices as a scientific man the profession of pharmacy.—*Excerpt from address of Dr. Solomon Solis-Cohen, Philadelphia, Chairman of the Delegation from the Section on Pharmacology and Therapeutics of the American Medical Association, to the meeting of the American Pharmaceutical Association.*

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SAL HEPATICA has been found specially serviceable as a safe laxative and eliminant of irritating toxins resulting from fermentation or decomposition of food, in inflammatory conditions of the bowels, affording prompt relief in stomachic and intestinal indigestion, colic, acute or summer diarrhea of either adults or children. It is remarkably free from any griping tendency, owing to its antacid and soothing properties.

Bristol-Myers Co., 277 Greene Avenue, Brooklyn, N. Y., the manufacturers, offer to send liberal samples to physicians, upon request.

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NEURALGIA.—The pathology of neuralgia, like nearly all the diseases of the nerves, is obscure, but there is much in favor of the opinion that it is a disturbance of the nerve cells connected with the central end of the nerve trunk. Neuralgia has been defined as the cry of the nerves for food. More exercise, less stimulants, a regulation of the dietary and some serious course of work and intellectual employment are valuable in bringing the mental and bodily organs to a normal state.

After such a treatment the system is prepared for the administration of a true sedative, for this is the real food for the nerves. Physicians have found Daniel's Conct. Tinct. Passiflora to most perfectly fulfil the needs of the impoverished ganglia.

In cases of neuralgia and other diseases arising from a disturbed nervous system, Passiflora is a powerful therapeutic agent, acting as a stimulant to the functionally deranged nerves, restoring their power and alleviating the attacks of pain. Passiflora gives natural rest without reaction.

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THE VALUE OF CODEINE.—The *Cleveland Medical Journal*, quoting from the *Denver Medical Times*, concerning codeine, states that, according to Butler, "it is less depressing and more stimulating than morphine, does not constipate, cause headache or nausea, and rarely leads to the formation of a habit. Codeine seems to exert a special, selective, sedative power over the pneumogastric nerve, hence its value in irritative laryngeal, pharyngeal, and phthisical coughs with scanty secretion. Like morphine, it has proved of value in checking the progress of saccharine diabetes, and it has been used for long periods without the formation of the drug habit, inasmuch as when glycosuria was brought to a termination by dietary and other measures, the cessation of the use of codeine was not followed by any special distress. The effects of codeine on the ali-

mentary canal are remarkable, in that it assuages pain as well or better than morphine, and nevertheless does not check the secretions or peristalsis notably, unless the latter is excessive, as in dysentery."

In view of these facts it would seem that Antikamnia and Codeine Tablets are a remedy which should find a wide field. Prof. Schwarze (*Therapeutische Monatshefte*), in writing upon the treatment of the different forms of dysmenorrhea and the different forms of congenital deformity of the uterus, states that the coal-tar analgesics are of much use, as well as the preparations of iron and sodium salicylate. In many cases it is necessary to administer codeine in small doses, and the tablets of Antikamnia and Codeine would seem to have been especially prepared in their proportions for just these indications.

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FOR NERVOUSNESS, SLEEPLESSNESS, AND SEXUAL EXCITEMENT, characterized by erections or even chordee, various authorities vary in their recommendations. Ringer recommends the use of aconite and camphor. Bartholow and Phillips both advise the administration of lupulin. The value of hyoscyamus has been appreciated by many medical men for a long time, and is quite valuable. Bromidia is to be highly recommended, since it consists of chloral, bromide, hyoscyamus, and cannabis indica, and acts as a somnifacient, spinal sedative, and hypnotic. The dose is a drachm to two drachms an hour before bed time.—*American Journal Dermatology*.

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HOME-MADE BUTTERMILK.—It is now within the power of every household to have an abundance of that refreshing and healthful summer (also winter) drink—buttermilk. To the present time no one knew of any source of buttermilk except from the butter-maker; but now-a-days the butter-maker does his work so well that the buttermilk is entirely deprived of the delicious little grains of fat which add so much to its food qualities as well as to taste. True buttermilk, made direct from fresh, rich milk, within a few hours, of the finest flavor and taste, nutritious, and more excellent than the article as originally known, can now be prepared in any kitchen. This is done by taking a quart of fresh, rich milk, adding a pinch of salt, and about a half pint of hot water to raise the temperature to body heat, and lastly adding a tablet which contains a pure culture of lactic acid bacteria. Place all in a pitcher, cover with a napkin, and let stand for twenty to twenty-four hours at the ordinary temperature, and there is your perfect buttermilk. The tablets are made by Parke, Davis & Co., the pharmaceutical and chemical manufacturers of Detroit, Michigan, and are called "Lactone" or buttermilk tablets.

On the farm, in the process of butter-making the cream is allowed to sour spontaneously and is then churned. The souring is the lactic acid fermentation caused by lactic acid bacteria or ferments. The difference between the new and old process is one of method and not result. In

the old, the lactic fermentation is waited for and expected to occur spontaneously, with disappointment sometimes. In the new, the ferment in pure culture is directly planted in the milk, and the desired fermentation is secured without fail. In Bible days, spontaneous fermentation of dough was depended upon to leaven or lighten bread, and failure frequently attended the process, the dough putrefying instead of fermenting, and was then lost. Finally, man learned to add yeast to the dough and not to depend upon spontaneous processes, with the result of always securing the right fermentation and making a better and more nutritious bread. This new buttermilk process is a like improvement.—*Monthly Bulletin Indiana State Board of Health, June, 1907.*

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VIN MARIANI NOT A COCAINE PREPARATION; WILL NOT BE INTERFERED WITH BY THE HEALTH DEPARTMENT:—

*New York, September, 1907.*

DEAR SIR,—The *American Druggist*, August 19, 1907, in reply to a query, *erroneously stated* that Vin Mariani is regarded by the Health Department of New York as a cocaine preparation, and can only be sold under restrictions of the anti-cocaine ordinance.

Upon our protest that this was a misstatement of fact, injurious to us and to the trade handling Vin Mariani, the publishers in investigating the source of their information submitted the question personally to Dr. Darling, the Commissioner of Health, who promptly repudiated the statement as unauthorized. He further said that "Vin Mariana, under the new label adopted by the manufacturers, is not regarded as a cocaine preparation, and can therefore be sold as freely as any other medicated wine that does not contain cocaine."

In a retraction of their misstatement, the editor of the *American Druggist*, August 26, 1907, referring to the status of Vin Mariani under the various state laws, sets forth the opinion of the New York Board, and concludes: "We have no doubt that the Health Departments of other cities throughout the country will be influenced by the judgment of the New York officials, and the precedent established by them will be followed generally."

There is therefore no reason whatever why Vin Mariani under this new label should not be freely sold in this city, as such sale is *absolutely legal*.

Very respectfully,

MARIANI & Co.

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ELONGATION OF THE UVULA.—As a gargle in sore throat or elongation of the uvula, Kennedy's Dark Pinus Canadensis has very general endorsement, the usual proportion being a teaspoonful to a glass of water.

*Merle (Burleson Co.), Texas, Nov. 24, 1906.*

*The Anasarcin Chemical Co., Winchester, Tenn.*

Yours of the 25th of October was received. In answer to same I will say that your tablets excel anything it has been my pleasure to use; they are exactly as you represent them, and no mistake is made by any physician using them. My confidence in them is centered in the following case: A German, 42 years, suffering from gout, feet swollen, appetite gone, cirrhosis of the liver, constipation, heart's action very bad. The man was a hard drinker both of whisky and beer; he could not sleep at night without morphine. I cleared the liver and bowel with a calomel and pod. purge, then commenced your tablets. He began to improve from the start, using the tablets as directed, using all and only one more box. He is now a new man: sleeps all right; no swelling of the feet; heart's action normal; eats sour kraut same as ever, and no taste for beverages whatever. He calls the tablets "some buckshot." I intend to use these tablets in all my cases where they are indicated.

With highest regards, I am,

Respectfully yours,

J. P. CARRINGTON, M. D.

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**ASTHMA**—The doctor who treats all cases of asthma alike as a separate and distinct disease is making a big mistake. At best it is but a symptom and may be due to a variety of causes. A common cause is the gouty diathesis, or the toxemia of faulty metabolism constituting gouty or toxic asthma. The best treatment for asthma is that which removes the cause in each case. To overcome gouty asthma requires only to correct the gouty diathesis.

For this purpose there is no better remedy than Alkalithia. In many cases its action is almost magical, but, it is not a "cure-all" for asthma. Try it in gouty, or toxic asthma only, and it will not disappoint you.

---

**ELEGANT AND ELIGIBLE PHARMACEUTICAL SPECIALTIES**.—Physicians will find the following preparations manufactured by the old, well-known, and reliable manufacturing pharmacists, Robinson-Pettet Co., of Louisville, Ky., of great value: Robinson's Hypophosphites, a nutritive tonic and alterative; Robinson's Phosphoric Elixir, a modified and improved form of chemical food; Robinson's Lime Juice and Pepsin, a pure concentrated pepsin combined with pure lime juice; and Robinson's Elixir Paraldehyd, a hypnotic, sedative, anodyne, and diuretic.

---

**ETHICAL ELEGANCE**.—To obtain an antiseptic and germicide the equal of bichloride and carbolic without their dangerous features, has been a great study with the friends as well as the foes of these two corrosive agents. Dr. Tyree believes the problem is solved by the clinical and scien-

tific tests made with Tyree's Antiseptic Powder. These tests, with the opinions of gentlemen eminently qualified to pass upon the therapeutic value of any chemical agent, are embodied in an interesting little booklet, entitled, "George Washington's Physician," which will be sent free. While Tyree's Powder has hitherto been largely confined to obstetrical and gynecological work, careful experiments in the hospitals of this country and London, indicate its equal value in general, rectal, laryngeal, and oral surgery, whether of operative or mechanical application.

Should you feel sufficiently interested, the doctor will, upon request, mail a sample of this great antiseptic. In this connection he assures the profession that this is not done with a view of securing names for publication. This is never done, as his antiseptic is strictly an ethical one. His sole object is to acquaint the profession personally with the great value of this remedy. For samples and descriptive literature, write Dr. J. S. Tyree, Chemist, Washington, D. C.

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## *Reviews and Book Notices.*

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A TREATISE ON FRACTURES AND DISLOCATIONS. By LEWIS A. STIMSON, B. A., M. D., Professor of Surgery in Cornell University Medical College, New York. New (5th) edition, thoroughly revised. Octavo, 847 pages, with 352 engravings and 52 plates. Cloth, \$5.00, *net*; leather, \$6.00, *net*, half morocco, \$6.50, *net*. LEA BROTHERS & Co., Philadelphia and New York, 1907.

The universality of these injuries, and their demand for prompt treatment on the spot, require all general practitioners as well as surgeons to be conversant with the best manipulations and management. Their variety is too great for full consideration in works on general surgery, and the result of partial knowledge eventuating in a shortened leg or stiff joint is apt to be a law suit damaging to reputation and pocket. It behooves every medical man to be prepared.

In this volume, which has now become classical and the authority accepted both by the profession and the courts, Dr. Stimson has covered every known form of these lesions, many of which were first described in his pages. His literary style is notable for clearness so that his readers need not err. His work stands alone in literature as including a full consideration of Dislocations as

as Fractures, two cognate subjects advantageously handled in close connection. This single volume accordingly affords complete and authoritative information on a large and important surgical specialty. Its recognized position is shown by the demand for another new edition, the fifth, which the author has again revised to the latest date.

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**A TEXT-BOOK OF THE PRACTICE OF MEDICINE.**—For students and Practitioners, by JAMES MAGUIFFIN FRENCH, A. M., M. D. Third revised edition. OCTAVO. 1,276 pages, illustrated by numerous engravings in the text and by twenty-five full-page plates by chromo-lithography, photo-gravure, chromotype, etc. Muslin, \$5.50, net; leather, \$6.50, net. New York, Wm Wood & Co.

French's book, in the first two editions, had such success that, when a third revision became necessary, it was decided to rewrite the book completely, and to amplify it in those places where, originally, terseness had been chiefly considered, with the result that it now ranks in the class with all the large text-books of medicine. The author's exceptionally clear and lucid style has, of course, being retained. The order and arrangement of the subject matter have not been materially changed, and the same brevity and conciseness have been maintained to the exclusion of any unprofitable discussions of theories and personal observations. The work is brought right down to date in every department. A large number of new illustrations have been added, and many of these, in the form of full-page plates in tints and colors, are a feature of the book.

The third edition is not only a material improvement on the former ones, but is largely increased in size. From the first we regarded it as most admirable for the student of medicine, and its full and comprehensive character makes it also of far greater interest to the practitioner. The paper, press-work, and binding are in every way first class, and fully in keeping with all that is sent out by Messrs. Wood & Co. This edition, we are confident, will prove even more popular than the former ones.



The "Just as good" fiends are now pirating.—Insist on

**PHILLIPS'**

**MILK OF MAGNESIA**

Registered in the U. S. Patent office, Sept. 12, 1905.

( $MgH_2O_2$ ). **FLUID. ANTACID AND CORRECTIVE.**

This form of Magnesia is efficient in Antacid and Corrective indications. Especially so in the Gastro-Intestinal irritations of Infant, Child, and Adult life.

THE CHAS. H. PHILLIPS CHEMICAL CO., New York and London.

## THE SOUTHERN PRACTITIONER

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EDITOR AND PROPRIETOR

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VOL. XXIX.

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No. 12

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### *Original Communications.*

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#### SOME NOTES ON BRITISH SURGERY.

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BY WILLIAM D. HAGGARD, M. D., OF NASHVILLE, TENN.

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DURING a summer holiday with Dr. Willian J. Mayo, the writer had the exceptional opportunity of seeing the representative surgeons of England and Scotland in especially prepared lists of operations rather than the ordinary unselected work as it comes.

Generally speaking, the British Isles have not been regarded by Americans as offering a tempting field for surgical sight-seeing. It is true that in London it is notoriously difficult to see enough operative work to compensate for the time expended. The distances are so great that not more than one hospital can be visited in a day, and most of the public operating is done in the afternoon. There is no way to know definitely just what one

will see until after the clinic has been visited, and oftentimes in summer a day is fruitlessly expended in going to a hospital where the chief may be absent or the operations either deferred, or of an uninteresting character.

Moreover, our British cousins have disregarded the great educative value of seeing the methods and technique of their co-workers in other countries. Their excursions to other climes are vacations in which thoughts of surgery are quite relegated. It is said that the staff of one of the oldest hospitals in Great Britain do not think it needful ever to go out of the famous walls where they consider the surgical art has reached its fullest fruition.

It so happened, however, that in each of the cities we visited one or more of the leading men had visited the Mayo clinic at Rochester; and they in turn, arranged most interesting and instructive programs. We Americans came away with wholesome feelings of the soundness of judgment, cleverness of execution, the patience, and the extreme care which the Britisher bestows upon his work.

One could also tell at a glance which surgeon had traveled and profited by witnessing the work of colleagues in other countries and which one had been content to remain fettered by unbending methods which owed more to the history of past achievement than to the progress of present accomplishments.

#### LIVERPOOL.

In Liverpool the most original and striking work in the correction of deformities and the surgery of bones and joints, including fractures and dislocations, was witnessed at the hands of Mr. Robert Jones, the nephew and successor of Mr. Thomas, a pioneer orthopedist of exceptional ability, well known to the present generation as the originator of the Thomas hip and knee splints. Mr. Jones brings to bear all of the good belonging to the old and a startling originality for the new. He has carried the modern conception of pathology, with good surgical methods and new applications, into the rather dreary field of orthopedics. He is practically revolutionizing that much neglected branch of

our art, and has brought into the pale of operative relief many conditions hitherto treated most desultorily with cumbersome, long-continued, and impossible apparatus.

At his weekly clinic at the Royal Southern Hospital Mr. Jones operates on from twenty to thirty-five cases in an afternoon. This list comprises everything in the surgery of the extremities from tenotomy to resection or amputation of the hip. All the operations are rendered bloodless by constriction. The tourniquets are applied, anesthesia completed, and the limb rendered sterile and ready for operation before the patients are brought in. The tourniquet is a large tubing ending with a "T" shaped metal bridle, around which the end of the tube is easily made fast. The "trick of the tourniquet" is to make the degree of constriction with the first turn, the end being left long to fasten to the metal device. This long end is fixed and secured by the first lap.

Altogether, the most striking surgery was the rescuing from crippledness of the victims of infantile paralysis with contractures at ankle, knee, or hip; flail joints, eversion or inversion of feet, scissor-legs, claw feet, drop wrist, etc. By appropriate tenotomy, tendon transplantation, or by artificially ankylosing malpositioned joints by partial resection (arthrodesis), followed by simple corrective apparatus, these palsied or crawling cripples were made whole and given back their motion in a veritably wonderful way.

He is especially conservative in tubercular process of the joints.

It seemed strange to see plaster of Paris entirely abandoned, and instead splints of light, bendable sheet iron, japanned and padded on the inside with boiler felt and easily adapted to every condition. Who has not looked upon the pale and shriveled extremity after prolonged plaster encasement with deprecation! A special adaptation of the splint was for technic (Volkmann's) paralysis of the forearm from tight bandaging, etc., with flexion and wrist drop, by means of the "cock-up" splint holding the wrist in gradually increasing extension, until the muscle paralysis permanently disappears in a few months.

In fractures about the elbow, especially in children, he prac-

tices fixation by bandage only in the flexed position, claiming that is it not only the most comfortable one, gives the best position if partial ankylosis ensues, but is the simplest and really the only way to insure that the fragments do not get in the way of future mobility. Nothing could be simpler for the practitioner and is chosen by the expert.

In fractures of the clavicle all of the ingenious ways of "putting it up," which have been employed, were not found to be superior to the simple sling, with the body as the natural support for the flexed arm. A leather collar around the neck and a leather wristlet are connected by a piece of bandage, holding the arm in a comfortable and natural position. It is easy for the surgeon to welcome so simple an appliance, because they have about all come to the conclusion that fractures of the clavicle need very little in the way of appliances.

In fractures of the humerus he employs an ingenious method of reduction and dressing when one is without assistants. The wrist is tied to the neck and a loop of bandage through the angle of the flexed elbow is tied around the surgeon's knee, and traction is maintained while the splints are being applied.

For fractures of the leg he uses the Thomas bed knee-splint, consisting of a metal oval padded and covered with leather and fitted to the crease of the groin and nates, to which is fastened two parallel iron rods running some inches from the limb and terminating in a bend below the foot. The limb can have light sheet-iron splints applied to it also. The projection of the foot piece resting on any surface, with the fixed point at the hip, gives absolute immobility for the entire member. Traction and extension by straps fastened to the terminal part of the splint can be maintained nicely and altered at will. This is especially nice in fractures of the femur in infants. The advantage over the traction from above of the limb extended straight up at right angles to the body is that the child can be easily carried and moved about.

He uses the osteoclast for bow-legs, the Thomas wrench for over-correcting club feet, an ingenious support for beginning knock-knee, and wedge-shaped osteotomy of the tibia for advanced knock-knee.

Most of the bone cases are skilfully skiagraphed by Dr. David Morgan. Instead of adhesive plaster, pitch plaster on black calico is used. It does not stick so tenaciously and is made in the office with exceeding cheapness. The formula is: Pitch, 4 pounds; resin, 4 pounds; rectified tar spirits, 1 quart. Melt and add benzoline until about consistence of treacle, and spread on sheets of calico, which must have a lightly glazed surface. Allow one week for drying and tear into suitable strips.

At the Royal Southern Hospital I saw Dr. Alexander perform the operation of shortening the round ligaments, which has made the name of Alexander famous the world over. He performs the operation most skilfully and quickly. He sews the ligament to the pillars of the ring with fine silk in continuous suture.

Besides this and kindred gynecological work, he does all sorts of surgery, at one visit showing a nephrectomy, excision of the breast, prostatectomy, two herniotomies, an intestinal, and a number of minor operations.

There are two other large hospitals in Liverpool, the Royal, with 350 beds, and the Northern (Daniel Lewis), of 250 beds, through which Mr. Dinsdale and Mr. Murray conducted us.

#### EDINBURGH.

Queenly, historic Edinburgh, the birthplace of chloroform anesthesia, the cradle of asepsis, the early home of Lister and Keith, was the center of medical education at the beginning of the last century. There McDowell, as the student of John Bell, gained the suggestion which afterward gave ovariotomy to the world. Its famous University still has over one thousand students.

At a dinner given to Dr. Mayo, who is an Honorary Fellow of the Royal College of Surgeons of Edinburgh, at which the venerable Mr. John Chiene, Senior Surgeon of the University, presided, he told us of the famous Lord Lister's residence there before he moved to London, and how his earliest conceptions of the efficacy of carbolic acid came from observing its use in the purification of the sewers of Carlisle, which had become greatly fouled and pestilential.

The Royal Infirmary with its 600 beds, attached to the Univer-

city. has four surgeons, the veterans Chiene and Annandale, Messrs. Cottrell and Caird. The latter we saw in the favorite but intricate field of abdominal surgery. He performed a gastro-enterostomy without clamps, using curved needle and thread without mechanical device. Each surgeon has separate wards and independent operating rooms. All of the work seen at this hospital was sound and well executed.

Mr. Alexis Thompson operated one morning at the Deaconess' Hospital. We commented on the anatomical knowledge displayed for which Edinburgh is famed. Hernia operations always give an advantageous opportunity for this, and the dissections were very beautiful. The Andrews' operation (not transplanting the cord), which is so generally practiced in America, was employed by Mr. Thompson. In closing the skin he used a continuous silk-worm gut suture of so fine a quality that it seemed like horse hair. In an umbilical hernia, the Mayo operation of sliding the lower flap of fascia under the upper flap, was favored. It was interesting to see an amputation of the thigh without pins and tourniquet, which resolved itself into a rapid dissection with ligation of the femoral in continuity. Between cases Mr. Thompson put on sterile cotton gloves while visiting an adjoining ward. This is useful for assistants who help move the patients, and might be used with satisfaction by the obstetrician after examination and while waiting. It would save the repetition of hand cleansing.

Mr. Harold Stiles showed us some of the cleanest and soundest surgery we saw abroad. At the Royal Hospital for Children, which is a beautiful, modern building, finely equipped, he has an excellent service. He has done over 800 hernia operations without a death and with no recurrences, save in two instances both strangulated. He believes in the early radical operation: says the earlier the operation is done the less trouble to everybody concerned. He thinks the most favorable time for the operation is about five months, just before teething. He finds it a simpler operation and less trouble than a circumcision. The child is placed on a large hot water bag. The fundus of the sac is not removed, but the neck is carefully isolated and tied.

Poupart's ligament is brought to the conjoined tendon with one suture of catgut. The cord is never displaced unless the hernia is direct. There is nothing wrong with the canal anyway; the patent peritoneal process is the real lesion. The short incision is closed with one square mattress suture, which goes through the ring. It is difficult to maintain a dressing on children; a paste of iodoform in a 1:1000 solution of mercuric bichloride is smeared on. The suture is removed in a week and the child allowed to go home.

He finds the sac communicating with the tunica vaginalis testis in about ten per cent., but gangrene in strangulated hernia in children is extremely rare, because the tissues are so elastic.

In infantile paralysis affecting the leg with drop-foot, but in which the psoas, iliacus, and glutei were not paralyzed, he ankylosed the knee by removing the cartilages, and the ankle by chiseling a V-shaped portion of the astragalus and fixing it to the tibia by a steel nail driven in from the heel and allowed to remain three weeks.

A case of hydrocephalus ten months old, measuring 21 1/4 inches, was treated by ligation of the common carotids two weeks apart. This was done to prevent the excessive formation of cerebro-spinal fluid, as nothing can be done to hasten its absorption.

He has found that the existence of spina-bifida contraindicates operation in hydrocephalus.

At the Chalmers Hospital in a doubtful case of tumor of the breast, he excised a portion and by putting it in pure nitric acid the carcinomatous areas were prettily shown by whitish specks. He then performed the radical operation in a most skilful and thorough fashion.

In tubercular osteitis of the shaft of long bone, he resects as many inches as necessary sub-periosteally, and after suture and making a closed tube of the periosteum, beautiful X-ray pictures were shown, taken at short intervals, illustrating the rapid formation of new bone and complete restoration in a few weeks.

At the University we visited Professor Cunningham's anatomical rooms. They were hung around with a number of life-

sized drawings which are familiar in his text-book. The museum is very complete, but the chief interest centered in the many beautiful dissections which were brought out of their vats, showing the important areas faultlessly dissected. We were especially attracted by the series of dissections showing the stomach *in situ*, which led Professor Cunningham to propose the theory that the stomach is almost perpendicular during the process of digestion.

#### NEWCASTLE-UPON-TYNE.

At Newcastle-Upon-Tyne we visited the new Royal Victoria Hospital at the invitation of Mr. Rutherford Morison, whose work we very profitably witnessed. In gall-bladder disease he makes the incision parallel with the costal arch. It gives considerable breadth to the exposure, but does not seem to be superior in general amplitude to the longitudinal incision to which we are accustomed. It showed Morris' pouch between the kidney, liver, and duodenum very plainly. In this as in most of the hospitals perchloride of mercury seemed to be the choice antiseptic for the hands and the skin cleansing.

We were pleased to meet Dr. Drummond, one of the attending physicians, who theoretically worked out and suggested the operation for hepatic ascites of side-tracking part of the venous return to the liver from the omentum to the abdominal wall, by fixing it to the parietal incision. The operation is known as the Talma-Morris operation (epipoplexy), but in the States has been found beneficial in only a slight minority of cases.

Mr. Grey Turner, the assistant surgeon, was the most enthusiastic and progressive of the younger men we met in England. He operated with much dexterity and has a brilliant opportunity. He is a thorough pathologist, teaching gross surgical pathology (a much neglected but most important subject) in the Durham University located at Newcastle. Pathologists have cultivated microscopical technique to the detriment of the practical knowledge of the gross, which is so essential clinically. He has accumulated a most complete working museum of typical specimens, which are exquisitely prepared. They were preserved: (1) In forty per cent. formalin for one day. (If the specimen is to



be cut it is kept submerged for two days.) (2) It is kept in Columbian spirits until the color returns; and (3) is stored permanently in acetate of potash, 200 grams; glycerine, 400 grams, water, 2,000 c. c.

The anatomical preparations at the University were wonderfully preserved. Many complete dissections of the extremities were seen stored in metal trunks which were several years old, yet were soft and pliable, and as fresh as one could desire.

#### LEEDS.

While Mr. Moynihan's guests for three days we had the pleasure of seeing his private operations, as well as his public clinic on Thursday, which is largely attended. His brilliant work was quite up to our expectations, and was exceedingly clever and painstaking. We witnessed about a dozen stomach and duodenal cases, representing about all of the procedures now in vogue. His technique was most elaborate and exacting. Regarding the skin as almost invariably secreting micro-organisms with the perspiration, he keeps it covered by terra-cloth (a fine-meshed material), which is fixed to the margins of the incision by his volsella forceps devised for the purpose. He operates on all cases of ulcer of the stomach with obstruction to the pyloric outlet, sewing the jejunum to the posterior wall of the stomach, where it normally passes underneath it with only the transverse mesocolon intervening. If the jejunum comes out to the right he makes the opening in the stomach obliquely from left to right (Moynihan's operation), and if the jejunum comes out to the left the incision in the stomach is from right to left to correspond with it (Mayo's operation). He uses a curved needle without a holder and Pagenstacker linen. The same form of gastro-enterostomy is done for duodenal ulcer, which he has shown constitutes nearly one half of the ulcers and of which he operated on several examples.

In partial gastrectomy for cancer of the stomach we saw him employ for the first time a method which will certainly become an essential feature of this operation, and which, doubtless, will be fully described and illustrated by him in the near future. It

consisted in uniting the jejunum to the fundus of the stomach (for the new outlet) after the stomach had been mobilized, but *before* it was entirely removed. It thus furnished an admirable exposure for the anastomosis and facilitates this otherwise tedious step amazingly. All of his intra-abdominal maneuvers were performed with the greatest ease and precision. In closing the skin incision he used the Michels' metal clips on a self feeding machine. He has discarded bulky dressings and abdominal bandages, and covers the wound with a small gauze pad, the margins of which are pasted on with a sterile solution of gelatin. The formula is as follows: One ounce of a twenty per cent. solution of gelatin sterilized fractionally on three successive days to temperature of 100° C. To this 20 gtt. of a four per cent. solution of formalin is added.

The after treatment of his stomach cases is very simple. He allows a cup of tea (the indispensable nectar of the Briton) two or three hours after the patient comes out of the anesthetic. Then water is given *ad libitum*.

We saw a very simple and efficient arrangement for keeping the patient in Fowler's position at the Leeds General Infirmary that effectually keeps them from slipping down in bed. It is a bolster-like bag twenty-eight inches long covered with rubber and stuffed with straw, twenty-one inches in diameter. The tuber ischii rest upon this, and it is kept in position by straps of webbing fifty-two inches long with buckles twenty-seven inches from the bag that are secured to the head piece of the bed. With this bulwark to keep the patient from slipping down, it is easy to maintain the sitting position with seven or eight small pillows.

#### LONDON.

About all of the ancient and large hospitals of the metropolis have medical colleges attached to them, and each is in affiliation with the University of London, which is purely an examining and licensing body. The beds are absolutely free, and there is no provision for paying patients in any of them, except St. Thomas' Hospital.

The London Hospital in Whitechapel, of which the Queen is president, is the largest hospital in England. It was instituted

in 1740, and treated over 14,000 patients last year and over 200,000 out patients. The surgeons are Mansell-Moullin, Harry Fenwick, Eve, Jonathan Hutchinson, and Openshaw.

St. Bartholomew's Hospital and College, the oldest hospital in the capital, is in Smithfield near "Old Bailey," a block from St. Sepulcher's Church, where the doughty Captain John Smith is buried, and looking on the open square inside of the walls where all of the executions were held. It was here that the Scottish hero, William Wallace, was beheaded. The priory and hospital were founded in 1173, and rebuilt the last time nearly two hundred years ago. The Medical School was rebuilt in 1876, and is being added to now. It has been hallowed by the lecturings of Harvey, Abernathy, and Percival Pott. The surgeons are Harrison Cripps, Bruce Clarke, Anthony Bowlby, Lockwood, and D'Arcy Powers.

Guy's Hospital (and Medical School), near London Bridge, founded by the munificence of Thomas Guy, the wealthy bookseller, in 1724, was made famous by the work of Bright and Addison, who were attending physicians there in 1824. The lamented Hilton Fagge also did his work there. It has 600 beds. The amount of expenditure is nearly one third of a million dollars, less than half of which is by voluntary contributions.

The surgeons are Golding-Bird, Symonds, Arbuthnot Lane, and Sir Alfred Tripp.

St. Thomas' Hospital (and Medical School) gracefully stands on the Albert embankment of the Thames, opposite the House of Parliament and abutting on the park of Lambert Palace, was originally founded in the twelfth century and dedicated to Sir Thomas A. Becket. It has been rebuilt twice, the last time in 1871, at a cost of \$3,000,000. It is built on the pavilion plan, and consists of six blocks of three stories each. It contains 560 beds. There are four operating theaters, built in pairs. The students on the elevated seats can look through a glass door into the adjoining operating room and go back and forth.

The chief surgeons are Messrs. Ballace, Battle, Clutton, Pitts, Makins, and Robinson.

The University College Hospital and Medical School are

magnificent structures, erected by the gift of Sir Blundell Maple. The hospital, which is modern and complete in every detail, containing about 300 beds, was opened last November, and the Medical School has just been completed. Sir Thomas Barlow and Dr. Rose Bradford are Professors of Medicine, and Messrs. Arthur E. J. Barker and Goodlee Professors of Surgery. Sir William Gowers and Sir John Williams are consulting physicians to the Hospital, and Sir John Tweedy and Sir Victor Horsley consulting surgeons.

St. George's Hospital and Medical School, at Hyde Park Corner, between Kensington Gardens and Buckingham Palace, is an old and famous institution. It has associated with its history such medical notables as John Hunter, Baillie, Jenner, Brodie, Bence-Jones, and Hewett. It has 350 beds.

The surgeons are Messrs. Geo. D. Turner, Geffrey, and Pendlebury. Dr. Rolleston, the well-known writer, is one of the physicians, and Dr. Hewitt is the anesthetist physician.

King's College Hospital, in Lincoln's Inn Fields, is also in affiliation with the University of London, and has such famous teachers as Mr. Watson Cheyne, Mr. Barrow, and Mr. Carless; Sir Hugh Beevor and Dr. Playfair are on the medical side. Hardby, around one of the labyrinthian corners, is the original "Old Curiosity Shop" immortalized by Dickens.

Sir Victor Horsley, the pioneer brain surgeon of Europe, was seen at the National Hospital for Epileptics. He has retired from teaching at the University College. The case was a brain cyst in a florid, healthy, middle aged woman, producing marked alterations in disposition, a long series of visual changes, and as it proved, an accurate localization. The operation was done in two stages to avoid shock. The large circular osteoplastic incision had been made by a motor saw five days previously and the scalp temporarily united by sutures. The operation was done under chloroform-oxygen anesthesia, as the combination is believed to control venous and capillary oozing. The slight asphyxia of chloroform increases the venous pressure, but the bleeding stops as the dark blood is oxygenated into scarlet. The Vernon Harcourt apparatus is used exclusively in brain work. The per-

centage of chloroform is regulated to a known percentage from one half to two per cent.

The patient is placed in the elevated-head posture, and the field of operation is constantly irrigated with salt solution. The hemorrhage was very considerable and delayed what finally became a beautiful exposure. The cyst was accurately identified and opened. Drainage is rarely used on account of the danger of sepsis. We were impressed with the extreme patience and perfect mastery of the situation, which came from an unrivaled experience and a wonderful aptitude for an operation of so great magnitude as to be quite formidable in less skilled hands.

Sir Victor urges early operation for the relief of the causative intra-cranial tension in all cases of optic neuritis to avert blindness.

In Jacksonian epilepsy and the series of symptoms denoting the grosser cerebral lesions, he advocated operation after six or eight weeks energetic medical treatment proves unavailing. Operation is confidently advised for the removal of clots, opening abscess, and the removal of tumors manifested by pain, vomiting, and optic neuritis, if the localization can be made.

Mr. A. W. Mayo Robson, formerly of Leeds, but residing in the metropolis for the last several years, enjoys the largest private surgical practice in Great Britain. He has given up public hospital work, and hence does his operating at Nursing Homes, which are ordinary town houses converted into infirmaries and conducted by trained nurses. They will accommodate ten or fifteen patients each.

On account of his great experience and contributions to gall-stone surgery, many of these cases are referred to him from the entire empire. We saw them from India and Australia and other provinces. His technique is very simple and his work most thorough. His prescience in the detection of gall-stones is remarkable, and enables him to almost unerringly see the pathology through the abdominal wall, when confronted with a complex of symptoms in the upper abdomen, with pain and its protean manifestations as the central figure. The series of cases which were operated on while we were there presented most of the typ-

ical conditions encountered in gall-bladder diseases and its complications.

We were struck with the comparatively large number of cases with stones in the common duct, with or without jaundice. This operator by rotating the liver and elevating it puts the common duct on the stretch and brings it almost to the surface. By this method he has reduced his death rate in these serious cases from 16.2 per cent. to 3.9 per cent. in one group of seventy-six cases. Such a record is most remarkable.

The views and technique of Mr. Robson are so well known in this country from his visits here and from his writings, especially in his work on Gall-Stones, as to need no description. Moreover, an attempt at doing so, even so superficially, would greatly exceed the limits of this review.

We had the pleasure of meeting Mr. Cambridge at a luncheon with Mr. Robson and of looking over the proof sheets of the new work on Diseases of the Pancreas, which they are jointly bringing out.

Mr. Bland Sutton is one of the surgeons and lecturers on surgery at the Middlesex Hospital. He is the cleverest and most rapid of the abdominal operators. For some years his clinic has been one of the spectacles of the metropolis. The most striking thing is his marvelous rapidity, and like most fast operators he does not seem to hurry. The secret is in accuracy of maneuver. No unnecessary motions are made. Doubtless this is a gift and certainly is a matter of temperament. A more tangible element is a swift and unerring recognition of the pathology and its topography. For years his work on tumors has been standard. His knowledge of the natural history and gross pathology of pelvic conditions is most comprehensive.

He completed a hysterectomy for fibroid in eighteen minutes. Our best American surgeons would have bestowed thirty minutes as a minimum on a similar case. The difference in time is accounted for by a finesse and more patient attention to minute detail, especially in layer closure of the incision. Mr. Sutton uses silk throughout. Only two or three stitches are used to cover over the stump, and the incision was closed by a few through and

through sutures of silk on a straight needle after the method of the earlier ovariectomies.

In a doubtful case of obscure abdominal pain, seen in consultation, we witnessed the rather infrequent and refreshing example of a truly great surgeon acknowledging an absolutely normal state of the abdominal contents revealed by a useless exploratory operation.

I regret that space does not permit reference to much other instructive and interesting observations. No poor words of mine can adequately describe the wealth of operative material, the good sound surgical work, the unfailing courtesy, and exquisite hospitality which were crowded into the delightful month spent with Dr. Mayo in Great Britain.

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## VACCINE THERAPY, WITH AND WITHOUT THE OPSONIC INDEX.\*

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BY WM. LITTERER, M. D., OF NASHVILLE, TENN.

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OUR bacterio-therapeutics have at last entered into a more practical stage, which heretofore have been entirely tentative and fraught with great risks. When Wright demonstrated the fundamental facts of his theory, he did more than any other to further the extension of the therapeutic lines of bacteriology. This is being evinced by the fact that his laboratory conclusions are beginning to impose themselves upon the clinicians as essentials for an intelligent and successful management of certain obstinate cases which have heretofore resisted all known methods of therapeutics. Phenomenal results are being obtained from practically every quarter, where the vaccine treatment in certain affections has been introduced. It is quite true there have been failures, but the list falls so overwhelmingly in the minority that such failures may be justly attributed to our incomplete understanding of the true nature of the opsonins and vaccine therapy; for much still remains obscure concerning their great possibilities.

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\*Read at Nashville Academy of Medicine, Tuesday, Nov. 12, 1907.

We have become so accustomed to speak of the suspension of dead bacteria as "bacterial vaccine" that through usage it will probably not be changed; though etymologically impossible, for the word *vaccine* is derived from *vacca*, meaning a cow, and was first used to designate the material employed to protect against small pox. Some maintain that its use is unnecessary and confusing and should be strongly deprecated. But the term is here to stay. It was employed by Pasteur long since to designate his attenuated cultures in the protective inoculations against different bacterial diseases. The long-established custom of calling them vaccines has given the term some degree of fixity, besides which, it is not altogether inappropriate to call all of the substances used for the purpose of active immunization or protection against disease by the same name.

The opsonic power of the blood is increased by the following conditions: (1) Naturally, as the result of recovery from infection; (2) by systematic immunization by means of living attenuated bacteria; (3) by dead bacteria; (4) by certain proteid constituents of the bacterial protoplasm. The dead bacteria are now commonly employed for this purpose, especially since this is the procedure that Wright has advocated all along in his many important contributions to vaccine therapy.

It is maintained by some that the size of the dose of bacterial emulsion to be inoculated and the time of its administration, the extent of the infection as well as the general condition, as regards the presence or absence of fever, should all be governed by the patient's opsonic reading. I am free to admit that the ideal and most satisfactory results are obtained by estimating the opsonic indices of your patients, which undoubtedly enables us to judge the proper dose of a vaccine, likewise the appropriate time for inoculation and re-inoculation. But I am about thoroughly convinced that the many estimations of said indices are not worth the time it takes to make them, even granting that the results are mathematically accurate, which is by no means the case.

Vaccine therapy is beginning to assert itself in all branches of medicine, even when encumbered by the idea that the opsonic index is absolutely necessary for a successful management of any



given case. What we as laboratory workers should encourage, is to place this new and brilliant field of bacterio-therapeutics on a more practical basis, so that it would be possible for the practitioner and surgeon alike to use the vaccines with the same impunity as the trained specialist. If we can eliminate the estimation of the opsonic index, then our vaccine therapy can be reckoned with from a practical standpoint. This I believe is possible in most cases. However, there are a few instances in which the taking of the index is an absolute necessity; (1) In any condition in which after vaccine therapy, the patient obtains very little or no benefit from its use; (2) where the individual exhibits idiosyncrasy to the inoculated vaccine; (3) to estimate the specificity of opsonins to certain bacteria which have been isolated from a given case. For example, given a case of cystitis, there will probably be several micro-organisms isolated, such as the bacillus coli communis, the Friedlander bacillus, and the staphylococcus pyogenes aureus. Now if the index of all these germs were taken, the chances are that only one or perhaps two of these will be really directly responsible. Consequently, the patient's index will be correspondingly low to said germs that are producing the trouble; hence the one or more micro-organisms are chosen as a vaccine. In a previous communication, I was in all probability a little too enthusiastic in championing the cause and necessity of estimating the opsonic index; while, at this writing, the pendulum of my enthusiasm may be swinging a little too far in the other direction. Time and experience only can solve these knotted problems.

In contending that good results are obtained independently of routine determination of opsonic indices, I will offer a few cases that have recently come under my observation to substantiate my belief that the quantity of vaccine and the frequency of inoculations can be controlled solely by the clinical symptomatology of said cases. Two cases came under my observation suffering from furunculosis of more than three months' standing. They were never free from a boil during the entire time. Cultures were made and in both instances the staphylococcus pyogenes aureus was found in pure culture. A vaccine from each coccus was

made, being careful to use the same strain as that responsible for the patient's furuncles, because herein lies the most important step in the treatment, viz., autogenous vaccination. It required only two injections in both cases to notice a prompt drying up and beginning disappearance of the furuncles. The treatment, however, was continued until nine injections were made in order to keep the patient's opsonic index on the high tide of immunity. Four months since my last injection have elapsed with no relapse. One patient was treated scientifically or solely from the standpoint of the patient's opsonic index. The other patient was treated "non-scientifically," or from the practical standpoint. That is, nothing to guide us as to dosage save the constitutional symptoms. The final results were the same in both instances. In one I felt sure of the amount and time of dosage: in the other I was always more or less apprehensive as to the amount and time of the vaccine administration. But no harm resulted, in fact just as good if not apparently better results were obtained as in the former case, which was controlled by the opsonic reading.

The non-scientific method is not the ideal one, still it is far more practical and serves to place it in the hands of the surgeon or practitioner who can inject the vaccine at stated intervals after it has been prepared by the specialist. Therefore, the specialist may be analogous to the druggist who dispenses the medicine for its administration by the physician. A very striking cure of a staphylococcic infection occurring in a boy fourteen years of age, who for more than seven years had been annoyed with an occasional furuncle coming every two or three months. His blood seemed to be always out of order. Any injury or scratch would heal with great difficulty, and almost always be attended with suppuration, leading not infrequently to a very noticeable scar. Iron, quinine, strychnine, and other tonics were resorted to but without avail. A culture was made from a boil, which proved to be the staphylococcus pyogenes albus. A vaccine from this germ was manufactured and an injection was made every four days. Marked improvement was noticed by the second injection. In five injections apparent cure resulted, as shown by the fact that any scratch or injury of any sort received, healed with great

readiness. No furuncle has appeared since my first injection. In order to insure against a possible relapse, five more inoculations were given. Three months have elapsed since patient's discharge. His health was never better, and he has gained six pounds in the last two months.

Perhaps the most satisfactory cure, and one in which I had hoped of little success, occurred in an old negro man, aged sixty-one, who for years had been suffering from cystitis. To the writer's certain knowledge, pus and bacteria has been constantly demonstrated in his freshly drawn urine for the last five years. This urine has been used for several years in the classes of clinical microscopy, demonstrating a typical cystitic urine. Cultures were made which resulted in the isolation of three pathogenic germs, viz., the staphylococcus pyogenes aureus, bacillus proteus, and the bacillus coli communis. The opsonic index was taken for each micro-organism, which gave an index of .7, .8, and .7, respectively. Since the opsonic indices were relatively low to the three, I deemed it advisable to make three vaccines. Injections were given every five or six days for a period of one month, then a two weeks' rest occurred, followed by an injection every five or six days for another month until four months of like treatment was carried out, which resulted in an apparent cure.

The improvement for the first two weeks of treatment was very gratifying indeed, then the two weeks following comparatively little improvement was noticed. So injections were withheld for two weeks with apparent improvement, then the injections were again resorted to as related above, finally resulting in a cure. The disease did not seem to respond at times to the injections, and I was discouraged more than once, when a discontinuance of treatment often meant improvement (due perhaps to over dosage, as no opsonic index was recorded), and followed later by its administration, which again resulted in improvement. The patient at present has no trouble whatever with his bladder, and nothing can be found in the urine microscopically. However, only a few weeks have elapsed since he was discharged as cured.

Two other cases of cystitis have been treated almost identical to the above with apparent improvement the first week, but after

that the condition failed absolutely to respond to the vaccine. In one, I am estimating the opsonic index at the present time, hoping that the dose may be regulated in this way; but thus far, comparatively little results have been obtained. The other case has been abandoned as incurable so far as vaccine therapy is concerned.

Excellent results are being obtained by the writer in joint, bone, and glandular tuberculosis, also fair success in pulmonary tuberculosis in which the temperature is not running more than 100° F. This is accomplished by the administration of tuberculin in very minute doses, and gradually increasing the dose with each inoculation.

The specific treatment of tuberculosis by tuberculin is based on the principle of artificial immunization. It has been looked upon as impossible, as there is little clinical evidence that one attack protects against another. Nevertheless, many observers have succeeded in producing artificially in animals a certain degree of immunity, which if accomplished, it seems that the process of immunization must extend over a long period of time.

There are two methods at present to guide us, according to Trudeau, in the use of tuberculin as an immunizing agent, viz.; The laboratory and clinical methods. The laboratory method is that which has put forward by Sir A. E. Wright, who advocated the estimation of the opsonic index as a guide, both as to dose and to intervals between doses. The clinical method has been developed gradually for more than fifteen years of experience of those using tuberculin. The length of treatment, the size and interval of doses, are controlled entirely according to the clinical manifestation of the case. The clinical method endeavors to carry the patient to large doses — doses one hundred, one thousand, and even ten thousand times larger than the initial dose. This is accomplished by a careful, gradual increase in the administration of tuberculin, so that the drug may be rendered insusceptible to ten thousand times its amount that at first would cause signal disturbances. It is the effort to produce immunity to tuberculin without recognizable clinical reactions. The manifest general improvement frequently recorded in cases so treated shows that

gradual increase in the dose need not be harmful, whatever the state of the opsonic index in the mean time may have been. The conviction is gradually spreading that tuberculosis in various forms, as well as other infectious processes, more particularly when chronic, can be treated more or less effectively by means that stimulate the production of specific immunity and hastens the process of healing.

The bacterial vaccines may also be employed as protective agents in surgical practice where it is evident that satisfactory aseptic and antiseptic measures cannot be instituted, or in cases where the general vitality of the patient is low and it is probable that secondary infection by the pyogenic bacteria will follow.

In operations in the mouth, as for cleft palate, where it is impossible to control secondary infection by the pyogenic organisms, it is advisable to fortify the patient's system by bacterial inoculations so as to increase his opsonic index for staphylococci and streptococci before undertaking the operation.

In diabetics and albuminurics where the general vitality of the body is low it is believed that the success of surgical procedures can be materially enhanced by first raising the individual's opsonic index for the common pyogenic organisms. In a similar way secondary infection of tuberculous abscesses may be avoided, if a course of treatment with bacterial vaccines precedes the opening of the abscess.

In some accidents, wounds where perfect asepsis is doubtful, and where the mutilation of the tissues makes secondary infection by the pyogenic organisms probable, the use of the vaccines appears to be clearly indicated.

I have endeavored to analyze my results in an unbiased manner, with all due allowance for coincidence and being not unmindful of the fact of the intervention of other unknown agencies. I am led to the following conclusions: (1) That I am convinced that in bacterial inoculation we possess a therapeutic agent with a specificity of great merit which in most instances can be administered without the opsonic readings. (2) Vaccines made from the patient's own invading micro-organisms (or autogenous vaccinations) produce far better results than those made of stock

vaccines. (3) The treatment is harmless, quick, and efficient in certain chronic, localized infections, yet those who expect brilliant results or immediate cures in every case will occasionally meet with a dismal disappointment. (4) Our new field of bacterio-therapeutics has revived the dictum long since uttered by the immortal Pasteur, "that the day would come when it would be possible to eradicate the infectious diseases by vaccination."

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### HEMATURIA.\*

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BY PERRY BROMBERG, M. D., OF NASHVILLE, TENN.

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HEMATURIA, meaning the presence of blood in the urine, will be readily recognized as an important symptom in genito-urinary as well as in general diseases, and much depends on our success in placing the correct interpretation upon it.

Since it is not a disease, but merely a symptom of the existence of some pathological break in the normal continuity of tissue, it behoves us to study it as such, and to consider the various and sundry conditions which may cause it; bearing in mind always that we are sometimes unable to recognize the precise pathological condition upon which it depends.

I would preface my remarks with a plea for a more careful urinalysis in all cases requiring same, and that the existence of blood or its presence be not forgotten. Blood may be said to exist in the urine in two states, organized and disorganized; by the latter, meaning the so-called hemoglobinuria. It may be in such quantity as to appear pure blood or only an occasional corpuscle can be found by careful microscopic examination. It is particularly to the conditions producing small and not readily recognized quantities of blood that the surgeon will be called upon to exert his greatest care in the avoidance of error.

It may be said in a general way that there are two fundamental sources, *i. e.*, constitutional and local; and to the former belongs the blood appearing in the urine in a state of disorganization.

\*Read at meeting of the Nashville Academy of Medicine, Tuesday, Oct. 22, 1907.

while to the local (including the entire uro-genital tract) belongs that which appears formed or organized.

While the presence of disorganized blood does point to constitutional cause, we must not forget that its presence in conjunction with organic blood elements may be found in purely local diseases, but it does indicate a more malignant condition, for obviously the conditions necessary to disorganize the blood must be more profound.

Under systemic diseases in which this symptom may and often does appear, may be mentioned those diseases affecting either the composition of the blood or the integrity of the capillary blood-vessels, together with those rarer conditions in which we have so far been unable to definitely place the pathology.

Under the first group, or those affecting the composition of the blood, I would mention in the order of their frequency, malaria, purpura hemorrhagica, scurvy, leukemia, bilharzia-hematobia, and Winckel's disease or epidemic hemoglobinuria.

While under the second group, or those affecting the integrity of the vessels, may be mentioned syphilis, atheroma, and hemophilia. Under a general head would be included all those diseases which produce marked congestion of the kidney, either due to specific infection, or to a particular ptomain poison, as the malignant forms of the acute infectious diseases.

Under local cases, we are confronted with a multiplication of diseases of the kidneys, ureter, bladder, urethra, and prostate. The kidneys may be affected with tuberculosis, psorospermiasis, infarct, growths of various kinds both benign and malignant, stone, parasites as *filaria sanguinis hominis*, *echinococcus*, acute congestion and inflammation as in Bright's disease, or from toxic substances as carbolic acid, turpentine, and cantharides.

Floating kidney is said sometimes to be a cause, but it is probably traumatic. The ureter may be tuberculous, cancerous, or be lacerated by stone or trauma; the bladder with various tumors, tuberculosis, ulcers, stone, parasites, trauma, and ruptured varices; the urethra with gonorrhea, stone, trauma, or tuberculosis; the prostate with cancer, inflammation specific or non-specific, hypertrophy, and trauma.

With this array of diseases, each capable of producing blood in the urine, it may be readily seen that great care must be exercised in placing due and proper significance upon this important symptom. It will evidently be impossible, as well as unnecessary, for me to discuss the features of differentiation in each of these conditions; but let me say, that in order to begin our process of reasoning in an effort to differentiate, it will be necessary to carefully examine first the patient and second the specimen. The examination of the patient should properly begin with an anamnesis. It must be learned what diseases have occurred in the patient's family and of what maladies his near relatives died. Special attention should be given to tuberculosis, rheumatic or gouty affections, and lithiasis, because they are diseases in which heredity plays an undisputed role. After obtaining his general history, we now direct our special interrogation to the patient and determine four cardinal facts:—

(1) The frequency of micturition; (2) the changes in the urinary stream; (3) the presence or absence of pain; and (4) the admixture of blood.

By the first question we are able to determine whether or not we are dealing with an inflammatory condition or with some non-inflammatory type, as diabetes. By the second we may be led to investigate the presence or absence of stone or stricture. By the third our attention will be directed to the location of the pathology, generally speaking, whether it is in the penis, prostate, bladder, or kidney. By the fourth we may be able to form some idea of the quantity of blood, whether blood was ever passed before, whether it occurs under the influence of motion or exercise, whether it occurs suddenly, how long it lasts, if accompanied by pain, if at the end of micturition, etc., etc.

Knowing that urinary hemorrhage is most frequently associated with certain conditions, we may be able by interrogation properly applied to avoid unnecessary examinations, and to arrive more quickly at a conclusion, to be later verified. As an example, if the hemorrhage always takes place following exercise, it would indicate renal or vesical calculi, which in turn might be differentiated by reference to questions one, two, and three of the outlines already referred to.



If the bleeding occurs without apparent cause, not aggravated by motion, lasts a long time, and is not easily controlled by treatment, it would indicate a tumor of the kidney. By this method of interrogation we have been led to form certain suppositions, and it will then be our duty to verify or disprove them, and this is done by, first, examination of the specimen, and secondly, the patient.

The specimen to be examined should, if possible, be secured by catheterization, remembering that in the urine of women who have leucorrhea, leucocytes often appear in great numbers, and would not indicate disease in the urinary tract. The leucocytes of pus will of course have their proper significance.

The specimen supposed to contain blood should be examined for the various constituents, as the red blood corpuscles, fibrin, and hemoglobin. Finding the blood elements or corpuscles strongly direct our attention to the uro-genital tract for the pathology, while finding hemoglobin alone or with a markedly reduced number of corpuscles, we would strongly suspect the disorganization to have occurred before reaching the kidneys; though this is by no means an absolute guide.

The microscope is, of course, essential in the recognition of the corpuscles, together with the various bacteria in the diseases mentioned; while chemical tests will suffice for the recognition of the blood pigments, as hemoglobin, methemoglobin, etc. It will not be necessary to test the oxygen carrying power of corpuscles, or to differentiate between the varieties of hemoglobin. I shall not impose upon the patience of the members of the Academy to discuss the details of urinalysis, but would emphasize the importance of having our reports positive as to whether the blood was in a formed or disorganized state, whether pus, albumen, casts, or an excess of the unorganized solids, as uric acid, etc., were present.

By careful examination of the specimen we have determined the existence of blood, together with such other pathological products as are present, and we are now ready to determine the source of this hemorrhage.

If the specimen examined was smoky and the blood diffused

through it or thoroughly mixed, it would indicate renal origin; when we would likely by microscopic examination be able to verify this supposition by finding casts, both blood and epithelial.

If the first urine passes clear, and the last few drops contain blood or be almost pure blood, bright red in color and not diffused or mixed with the urine, it would indicate vesical or prostatic origin. In prostatic hemorrhage it is well to remember that often a small cast of the prostatic sinus is passed with the first urine, no more following until near the completion of micturition. This coagulum is usually dark in color and well formed.

In urethral hemorrhage the bleeding is usually independent of micturition, the blood being washed away with the first urine, the last being usually clear unless the bleeding be profuse.

In addition to these special features, symptoms referable to the organ involved are usually present; and being unable to improve upon, I will quote the statement of Professor Ralfe: " (1) Acute nephritis, smoky to dark brown urine, persistent for some days, with granular and bloody casts and excess of albumen. (2) Renal calculus: often deep red from excess of blood, increased by movement and passing off rapidly if the patient be kept in bed, so that only a few blood corpuscles can be seen in the urine; generally accompanied by or immediately following a severe attack of colic; retraction of testicle on side affected. (3) Vesical calculus: hemorrhage generally follows undue movement, especially jolting; bladder symptoms prominent; detection of stone by sound. (4) Cancer of kidney: hematuria very abundant with large coagula, and repeated at irregular intervals; generally tumor in loin. (5) Cancer of bladder: frequent and profuse hemorrhage; cancer cells in urine(?); pain referable to bladder; tumor may be discovered with sound. (6) Morbid conditions of the blood; hemorrhage often profuse, but rarely attended with formation of clots; general constitutional symptoms manifest. (7) Intermittent hematuria: the blood passes at irregular intervals, and is generally associated with a considerable quantity of albumen and a definite rise of temperature; history of chill."

Local symptoms may however be entirely absent and we will find our abilities often taxed to their utmost to find discoverable

cause for rather profuse bleeding. Such a case I now recall, which was referred to me by Dr. Douglas: Mr. C., farmer, age 53; family history negative; no previous illnesses of special bearing in personal history; began to suffer with moderate pain in right loin about two years ago; never had attacks of colic or other suggestion of stone, other than a rather free or profuse hemorrhage; as he expressed it, he urinated almost pure blood. After rest in bed and treatment at that time, all bleeding ceased and he was able to resume his work on the farm, noticing, however, that horse-back riding caused pain in the back, which he thought was more on the right than the left side. He had no recurrence of bleeding for fourteen months, when upon returning from a trip on horse-back around his farm he urinated pure blood again. This has continued for more than three months, in spite of absolute rest and treatment. He thinks that rest in bed has diminished the amount of blood somewhat, though not appreciably. Physical examination shows a palpable right kidney, rather anemic facies, though from the amount of blood lost we would expect more anemia. Bladder irrigated with sterile water and cystoscope introduced without obstruction; bladder normal, but blood issuing from right ureteral orifice. Specimen passed in the office appeared almost pure blood, rather dark in color and microscopically showed few corpuscles. A diagnosis of idiopathic hematuria was made with the possibility of renal calculus or purpura. This case refused operation, but under the influence of gelatin and calcium made a complete recovery.

These are unquestionably the type of cases in which Harris has failed to find pathology in nineteen exploratory nephrotomies, but with well nigh perfect results from the operation. The bleeding is probably of renal origin and possibly depends upon vaso-motor disturbances.

The treatment of hematuria would naturally depend upon the ability of the surgeon to determine the cause, remembering that often we are still unable to assign definite cause for rather profuse hemorrhage.

In cases indicating constitutional disturbance, the particular dyscrasia should be given careful attention. Where the bleeding

is of local origin, remedies applicable to these parts should be applied and these remedies differ in no material respect from those used to control bleeding elsewhere.

As a rule, local manipulation and catheterism should be avoided, except in those cases where the bleeding has been profuse and the bladder is filled with clots; it may then be necessary to catheterize, draw off the excess of urine and blood, and even digest the remaining vesical clots with pepsin and hydrochloric acid, when an attempt should then be made to control the bleeding; if from the bladder, by hot water or astringent irrigations; and by far the best is adrenalin. Where the bleeding cannot be controlled by such measures, suprapubic cystotomy should be performed and the bladder packed with gauze.

Absolute rest is a prime indication in all cases of hematuria, also careful attention to the physical comfort and well being of the patient, together with absolute restriction from sexual indulgence.

In cases of idiopathic hematuria, I think nephrotomy the operation demanded.

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## RENAISSANCE IN ANTISEPTICS.

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BY Q. C. SMITH, M. D., OF SAN DIEGO, CAL.

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DEAR DOCTOR ROBERTS: Probably you have noticed, in the *Journal A. M. A.* for Sept. 28, 1907, page 1,152, where a German surgeon has lately got on to the very old idea of applying *sugar* to fresh raw wounds. This sugar idea has been in common practical use among the common people, even in remote rural localities of the United States, from time immemorial.

As soon as the mistress of the home learned that some one was wounded, she hastened to snatch the sugar bowl and camphor bottle, and without stopping to wash the dreadful germs out of the wound, spread *plenty* of sugar all over it, and bound up the wound with clean, soft, old cloth; then immediately saturated the dressings with tincture camphor.

Fresh raw wounds thus dressed, and receiving reasonable after attention, rapidly healed, as a rule, with very rare exceptions, with little or no inflammation, and not a drop of suppuration! And this *modus operandi* was a common and frequent occurrence midst the early pioneer backwoods settlers of the United States long before Lord Lister, or Surgeon Meyer, or their germiphobic countrymen, were born.

Whether said ruralists learned the sugar-camphor idea from the doctors, or the M. D.'s learned it from the laity, I am not able to decide; but from what Surgeon Meyer says about it, it seems that many surgeons have not learned about the method yet.

But at least fifty years ago some of said ruralists learned to improve on aforesaid sugar and camphor idea, and instead of using plain tincture camphor, used paregoric. Paregoric causes less smarting pain and more quickly relieves soreness, and is more conducive to rapid healing. The dressings should be *kept* well moistened with paregoric, or tincture camphor, until the raw surfaces are all healed over. We have often used both crude brown sugar and white granulated sugar; and the brown sugar seemed to serve as well as the refined white sugar. Either should be applied without stint.

I was a student of the late Paul F. Eve, in 1866, when carbolic acid "struck" Nashville, and I watched its work closely; and when I left that city — *cum sheep hide* — I gave a big \$ for an ounce of carbolic acid to experiment with; but *soon* learned that my old grandmother's sugar-camphor remedy surpassed phenol in *any* strength or combination.

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A CONDITION OF EUPHORIA is often seen in serious cases of peritonitis and should not be taken as a sign of beginning recovery.—*American Journal of Surgery*.

IN MANY CASES of shock, a venous infusion will more often save life than dallying with stimulants which merely, in the end, serve to tire out the heart.—*American Journal of Surgery*.

AN EASY WAY to straighten out a probe that has been much bent and twisted is to roll it under the foot on an even floor.—*American Journal of Surgery*.

## *Editorial.*

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### CLOSE OF OUR TWENTY-NINTH VOLUME.

IN bringing to a close our editorial efforts for the now waning year and the twenty-ninth volume of this Journal, we again desire to tender our sincere and heartfelt thanks to our many friends, our readers and subscribers, our contributors, and our advertising patrons.

The many kind expressions from our readers and subscribers accompanying their renewals of subscription during the now closing year have been most gratifying and encouraging indeed, and justly demand a sincere acknowledgment on our part, which is most respectfully tendered. Their continued and liberal support makes us feel most wondrous kind to every one and every body, and not only expands our very heart-strings, but stimulates and encourages us to renewed vigor and sincere and most earnest efforts in the future.

To our valued and most highly esteemed contributors do we attribute more largely than anything else, the success we have achieved in our connection with Medical Journalism; and we can point with pardonable pride to the more than threescore "Original Communications" that we have been permitted to present to our readers during the year 1907, each one bringing a live message to some co-worker in the grand domain of Medicine.

Our advertising patrons we can and do most heartily commend, knowing from personal experience in every instance, that every preparation brought to the notice of our readers during the year is thoroughly reliable and well worthy of trial and confidence. The liberal patronage along this line secured during the life of this Journal, together with its steadily increasing subscription lists have enabled us to gradually and steadily increase and extend its scope and field of usefulness. This year has been a most satisfactory one in every way to us as editor and proprietor, and gives us full faith and confidence in our prospective efforts for the coming Thirtieth Volume.

We still have a very few names on our subscription list that began with us in 1879, but alas! by far the larger majority of those whose names first appeared on our subscription book a full generation ago have "passed over the river;" but their places have been taken by numbers of other and younger men each successive year, steadily swelling and lengthening our mailing list. To these and all others who may see proper to give us a trial, we can promise and assure that our sincere interest in the progress and welfare of our profession shall in no wise abate, and that it is and will be our most earnest endeavor to make each successive volume of this Journal better than its predecessor.

In the quite recent past we have been passing through a period of

somewhat unusual financial stress, whose penumbra, however, is gradually and steadily passing away. As to its real cause, we are not sufficiently versed in the pathology of high finance to give an opinion. It is more than possible that the wrestling rascals of Wall Street, near a half score of whom have come to grief, who, ere they had fallen in their struggles, had managed to fasten their tentacles on several very prominent banking institutions, that naturally "shut up shop," thus giving a shock of fright to timid cash, causing much of our currency to suddenly seek a hiding and hoarding place.

And again, by some it is claimed that the trouble is due to "the big stick" and our strenuous Teddy, who claims that he is not to blame, and that "he only turned on the light." In this he is sustained by the "permanent" or "pre-eminent" candidate for the Presidency of the United States of the "unterrified Democracy." Well, when the vigorous and victorious Lion of the East has the twice "shorn Lamb of the wild and wooly West" to *lie* down with him, the Millennium may be near at hand!

And yet again, it is said that it is only a lack of confidence that has caused so much of our "sho nuff" money to hide its undiminished head and give place to "packing house 'stificates," county warrants, *et id omne genus*. As we have stated, just exactly who said "BOOH!" we shall not attempt to positively say; however, with a real prosperity that has never been equalled in this great country, with granaries and garneres overflowing throughout the land, with a big crop and good prices for the grand Southern staple with its pure, white fleece wafting a message of peace and good will to all, hog and hominy in abundance and at remunerative figures, mules at the top, and the 'possum and persimmon crop unusually large, and the whirling wheels of Commerce unable to bear the load of our grand and productive acres, together with increased facilities of mine, factory, and forest, we have but little to really fear in the South and West; our Thanksgiving gobbler has been eaten with our accustomed zeal and zest, and with a larger one in reserve roosting on a high limb until the glad coming of yuletide, we can await the advent of 1908 with continued Faith and Confidence.

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#### THE SERUM TREATMENT OF EXOPHTHALMIC GOITRE.

HARRIET C. B. ALEXANDER\* discusses the subject and reports thirteen cases. Four principal theories of the disease have been advanced: (1) That it is due to disease of the sympathetic nervous system; (2) that the seat of the malady is the medulla oblongata; (3) that it is primarily a disease of the thyroid gland; and (4) that it is a neurosis.

Modern therapeutic measures have been largely based on the "thyroid" theory. The results of partial strumectomy indicate that the suc-

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\* *The American Practitioner and News*, August, 1907.

cessful removal of a portion of the thyroid gland can lead to cure or to definite amelioration of the condition. On the theory that the thyroid secretion normally neutralizes certain general metabolic poisons in the body, Moebius and others conceived of treating cases of exophthalmic goitre, in which there is presumably an excess of thyroid secretion in the body, by introducing subcutaneously, or by the mouth, the serum of thyroid-ectomized animals. It was hoped that the non-neutralized general metabolic poisons of such animals would nullify the toxic effect of the excessive thyroid secretion. As to the treatment, experience has shown the great importance of general measures: complete rest for a time, fresh air, careful diet, mild balneotherapy, etc.

The name Thyroidectin has been given to a preparation obtained under aseptic precautions from the blood of animals from which the thyroid glands have been removed, and which is exhibited as a reddish-brown powder contained in capsules, usually five grains each. Carefully conducted clinical trials seem to show that Thyroidectin can be depended upon to control the characteristic symptoms of exophthalmic goitre. In most cases the patient experiences much relief from the restlessness, tremors, insomnia, and other nervous symptoms so frequently present, and a gradual lessening of the frequency of the pulse rate, decrease in the size of the glands, and a diminution of the exophthalmos, with an increase of weight and a much better condition generally. The dose of Thyroidectin seems to be one or more capsules after each meal, according to the judgment of the physician and the reaction of the patient.

In nine of the author's thirteen cases the size of the gland was materially reduced, and in every case improvement was observed with respect to one or more of the symptoms.

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CITY VIEW SANITARIUM.—This month marks the opening at Nashville of a private institution for mental and nervous diseases, the City View Sanitarium. The need for such an institution in this section has been long felt and the management is meeting with the heartiest encouragement from the profession. Dr. J. W. Stevens, for a time a member of the staff of the Manhattan State Hospital in New York, and for four years past first assistant physician at the Long Island Home at Amityville, N. Y., will be the physician-in-charge, and will devote his entire time to the institution. A staff of nurses trained in eastern institutions will assist him. The property, formerly the St. Mary's Orphanage, has been completely modified and thoroughly rearranged, and all facilities provided for the most advanced treatment of the class of patients to which the sanitarium is devoted.

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CLIMATIC EFFECTS.—The winter weather is at hand and it is well



known to what extent the cold will aggravate many female troubles. Physicians have used many preparations without having found one of them which gave satisfaction. Physicians trying Tyree's Antiseptic Powder will be satisfied that they have at last secured just the preparation they desired. Tyree's Antiseptic Powder can be used freely in any strength, at any time, and in any case. It is superior and preferable to the mercuric bichloride solution, because it is devoid of any element of danger. Its solubility is greater than that of bichloride of mercury tablets, and it does not erode delicate mucous membrane. The observant doctor will find that it makes a solution that may be thoroughly depended upon as a responsible and reliable antiseptic healing agent. It is scrupulously made, and its well balanced chemical adjustment has established its medical popularity. A trial package will be mailed free of charge to physicians if they will send their name and address to Mr. J. S. Tyree, Chemist, Washington, D. C.

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BY ALL MEANS SEND FOR IT.—So great has been the demand, that W. B. Saunders Company, the medical publishers of Philadelphia and London, have found it necessary to issue another revised edition of their illustrated catalogue of medical and surgical books. In looking through the copy we have received, we find that since the issuance of the last edition six months ago, the publishers have placed on the market some twenty-five new books and new editions—truly an indication of publishing activity. The colored insert plate from Keen's new "Surgery," which enhanced the value of the former edition, has been replaced by a new one from the second volume of the same work, and this alone gives the catalogue a real value. A copy will be sent to any physician upon request.

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FUNCTIONAL NEUROSES.—The functional *neuroses* form an interesting group of diseases, for they are only symptoms at best, and it is up to the physician to get at the cause in each case, so as to overcome it, which is the essence of good treatment.

Many cases of migraine, asthma, chorea, hay fever, coryza, acute catarrhal rhinitis, urticaria, and pruritus are pure toxic neuroses due to the toxemia of faulty metabolism and imperfect elimination of waste products. This is best overcome by forcing elimination, and there is no better remedy for this purpose than Alkalithia. Whenever urinalysis discloses imperfect elimination of the urinary solids, in a case of a functional neurosis, Alkalithia is sure to benefit the case.

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THE USE AND ABUSE OF CARDIAC STIMULANTS.—Hare (*Therapeutic Gazette*). "In this article the author discusses the common disregard of certain essential details concerning the action of cardiac stimulants. Phy-

sicians themselves probably suffer more as a class from this abuse. The 'tired heart' commonly existing among physicians usually receives at their hand excessive doses of digitalis instead of the indicated rest. Strong coffee and other adjuncts are also self-prescribed, causing an increase of the cardiac disorder. Another erroneous use of cardiac stimulants is their employment in a state of undue excitation, in which condition cardiac sedatives are needed. Not uncommonly cardiac irregularity calls for small doses of aconite or veratrum viride. Again a patient with feeble heart receives digitalis when in reality the cause of the feebleness lies in a degenerated heart muscle, which is incapable of gaining any advantage from this drug. In fact by contracting a blood vessel digitalis increases the labor of the heart. Under these circumstances strophanthus or cactus, the action of which is cardiac, but slightly if at all vascular, should be used."—*Interstate Medical Journal*.

This is one of the numerous instances in which cactus is advantageously used. The expressions of the medical profession on *Cereus Grandiflorus* and *Cactina Pillets*, which truly presents the therapeutic properties of the drug in the highest form, are very encouraging. It seems that any drug that offers assistance in cardiac complications, and especially if it is devoid of the objectionable features of stronger cardiac remedies, should command the earnest attention of the bedside practitioner.

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RELIEF IN RHEUMATOID CONDITIONS.—Dr. Pettingill, of New York City, under the head of "Intestinal Antisepsis," reports some excellent experiences, from which the following is selected:—

"Every physician knows full well the advantages to be derived from the use of antikamnia in very many diseases, but a number of them are still lacking a knowledge of the fact that antikamnia in combination with various remedies, has a peculiarly happy effect. Particularly is this the case when combined with salol. Salol is a most valuable remedy in many affections; and its usefulness seems to be enhanced by combining it with antikamnia. The rheumatoid conditions so often seen in various manifestations are wonderfully relieved by the use of this combination. After fevers, inflammation, etc., there frequently remain various painful and annoying conditions which may continue; namely, the severe headaches which occur after meningitis, a 'stitch in the side' following pleurisy, the precordial pain of pericarditis and the painful stiffness of the joints which remain after a rheumatic attack. All these conditions are relieved by this combination called 'Antikamnia and Salol Tablets,' containing 2 1-2 grs. each of antikamnia and salol, and the dose of which is one or two every two or three hours. They are also recommended highly in the treatment of cases of both acute and chronic cystitis. The pain and burning is relieved to a marked degree. Salol neutralizes the uric acid and clears up the urine. This remedy is a reliable one in the treatment

of diarrhea, entero-colitis, dysentery, etc. In dysentery, where there are bloody, slimy discharges, with tormina and tenesmus, a good dose of sulphate of magnesia, followed by two Antikamnia and Salol Tablets every three hours, will give results that are gratifying."

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"THE PRACTITIONER should know something of pharmacy and its application to medicine as practiced. He should know, for instance, that there is a natural salicylate of sodium, and an artificial one; and that the natural one costs about \$6.00 a pound, and the other about 50 cents, and that his patients will not get the six-dollar variety unless he sees to it personally." — *Medical Sentinel*, October, 1907.

Physicians can feel assured that when their patients take Tongaline they get the salicylate of sodium made from the natural oil of winter-green.

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#### A LACHMENTATION.

The Ewe who had swallowed a drachm  
Of Paris green said to her rachm,  
I am going away,  
But as long as you stay,  
Please, dearest, be kind to our lachm.

— *Baltimore American*.

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Troy, N. Y., Nov. 5, 1906.

*The Anasarcin Chemical Co., Winchester, Tenn.*

I received sample box of your Anasarcin Tablets and used them in my own family in a case of valvular disease and renal stenosis. Such a pronounced localized edema of face on rising, and fingers; seldom in extremities or abdomen. Had used the usual remedies with no noticeable effect. Began with Anasarcin Tablets one hour before meals and on retiring. The result was most satisfactory, for on second day face and hands were normal and a better general condition of health has followed the continued use.

Elderly woman, fifty-six, had edema of feet, and ascites; mitral regurgitation. She was quite portly and I had little time or opportunity to examine heart; however found her in the distress of an attack of mitral regurgitation, followed by great agitation. Began the use of Tablets by crushing one and dissolving, giving solution of one every two hours. I was astonished at the rapid disappearance of the effusion, and the rapid betterment of my patient.

I have secured the tablets here in Troy, two boxes so far. I at first thought your literature rather strong, but now believe you are justified in all you claim.

Very truly,

E. J. FISK, M. D.

THE PSYCHOLOGICAL DEPRESSIONS and neuralgias so common in the period following a debauch, are lessened or disappear altogether by the use of Celerina.

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"RHEUMATIC SORE THROAT exhibits no exudate and no pus formation, but the membrane is a decided red, often rather dark, and is markedly aggravated by weather conditions that increase rheumatic symptoms. Local treatments and even the usually successful internal medicines for ordinary sore throat are inefficient."

Tongaline or Tongaline and Lithia Tablets, by rapidly expelling the poisons which are the source of the complaint, will secure most beneficial results.

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NOTWITHSTANDING the large number of Hypophosphites on the market, it is quite difficult to obtain a uniform and reliable Syrup. "Robinson's" is a highly elegant preparation, and possesses an advantage over some others, in that it holds the various salts, including Iron, Quinine, and Strychnine, etc., in *perfect solution*, and is not liable to the formation of fungous growths.

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SUCCESS MAGAZINE is one of our best quarto, illustrated, monthly literary periodicals. See the last two advertising pages in this number and add to your library and reading room at a very low cost. The ten volumes of nicely bound works by the leading English authors are alone well worth far more than the very moderate price.

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#### SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION

WE have received the "Preliminary Program" of this splendid, progressive, and active organization for the annual meeting to be held in New Orleans, La., Dec. 17, 18, and 19, inst. Over fifty papers are on the list, and a most enjoyable and profitable meeting can well be assured. We regret that want of space prevents giving the list of papers in full, and will only mention a few of the names, which in themselves should amply justify a pilgrimage to the beautiful city embracing the crescent shaped bend of the Mississippi River. Among the readers of papers will be Howard A. Kelly, Md.; R. L. Dickinson, N. Y.; Stone, McGuire, Bovee, and Fry, Va.; Jno. B. Murphy, Ill.; Jos. Taber Johnson and E. C. Balloch, D. C.; Chas. H. Mayo, Minn.; G. Crile, Rufus B. Hall, Jos. Ransohoff, and C. E. Caldwell, Ohio; Jno. B. Deaver and Jno. G. Clarke of Pa.; A. M. Cartledge of Ky.; Jas. N. Ellis and W. F. Westmoreland of Ga.; Geo. S. Brown, J. A. Goggans, and J. M. Mason of Ala.; and a number of others, each bringing out some special point that will be of incalculable value to any who may be so fortunate as to be on hand.

The officers for the meeting are as follows: Howard A. Kelly, Presi-

dent, Baltimore, Md.; Rufus E. Fort, Nashville, Tenn. and Hubert A. Royster, Raleigh, N. C., Vice-Presidents; William D. Haggard, Secretary, Nashville, Tenn.; Charles M. Rosser, Treasurer, Dallas, Texas; Dr. Denegre Martin, New Orleans, La., Chairman Committee of Arrangements.

The railroads have declared a return rate of one and one third fare on the certificate plan. The St. Charles Hotel will be the headquarters, and a special rate for the meeting has been arranged.

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ONE SHOULD INQUIRE carefully for the history of the application of carbolic acid to a wound, especially of the finger or toe, when a gangrene with a distinct line of demarkation has developed.—*American Journal of Surgery*.

SUDDEN, MARKED RISE OF TEMPERATURE a few days after an operation for appendicitis, especially if attended by chills, may mean thrombosis of the portal vein or multiple abscesses of the liver.—*American Journal of Surgery*.

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## **Reviews and Book Notices.**

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FOOD: ITS RELATION TO HEALTH AND DISEASE.—By EPHRAIM CUTTER, M. D., A. B., A. M., LL. D., and JOHN ASHBURTON CUTTER, M. D., B. Sc., of New York, N. Y. 8vo. cloth, pp. 384. Price, \$1.75. The Gazette Publishing Co., 29-33 West 42d St., New York, Publishers, 1907.

Foods as herein considered are substances received from without which enter into the tissues and fluids of the human body to become part and parcel of it, and thus normally sustain life; substances which build tissue and yield energy when taken into the system.

Three great divisions of food exist: Animal, Vegetable, and Mineral. To these are given consideration as to value, assimilation in health and disease, together with discussions as to the chemistry and physiology of digestion as influenced by morphology, climate, and the possibilities of sustaining life with single or multiple articles of food; the production of disease through exclusive feeding; the relation of various food products to vital functions; esthetics and fads in feeding, etc. Chapters are included on Alcohol, Fermentation, the Chemistry of Cooking, Care

of the Aged, Food in Acute and Chronic Diseases, in Surgical Affections, and in Uric Acid Diathesis.

This book has just been received from the press, and we believe will be appreciated by all who are interested in the preservation and restoration of health.

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THE MEDICAL RECORD VISITING LIST FOR 1908. Wm. Wood & Co., Publishers, 51 Fifth Ave., New York.

This is one of the best and handsomest Physician's Visiting Lists and Daily Memorandum books published. Good paper, handsome and durable binding, and the general arrangement is most excellent. It contains the full amount of the data usually found in such handy and useful companions of the active working practitioner. It is arranged for from thirty to sixty, and even ninety patients per week, and the prices range from \$1.25 to \$4.00; however, the ones at the first named price, for thirty patients, and those for sixty patients per week, at \$1.50 to \$2.00, are quite good enough for any one. They will be sent with express charges or postage prepaid to any one sending the price.

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ROENTGEN RAYS AND ELECTRO-THERAPEUTICS, with chapters on Radium and Phototherapy (Lippincott's New Medical Series), by M. K. KASSABIAN, M. D., Director of the Roentgen Ray Laboratory of Philadelphia Hospital; formerly Instructor in Electro-Therapeutics in Medico-Chirurgical Hospital and College; Vice-President of the American Physico-Electro Therapeutic Association; Member A. M. A., Pennsylvania State Medical Society, etc., etc. Cloth, 8 vo, illustrated, pp. 545. Price \$3.75. J. B. Lippincott Company, Publishers, Philadelphia and London, 1907.

This is not only the best work on the subject, but it is the latest. The initial part of the work considers Electro-Therapeutics, and its compendious character can but appeal to the practical physician. An exhaustive study of the X-rays follows, in which much care is given to a description of the apparatus employed; the technique is fully considered, as well as the dosage, and a lengthy discussion of the different methods in use. The therapeutic value and limitations of Radium are very fully considered; and space is given to photo-therapy and the remarkable discoveries of Finsen.

Although having a very wide experience, the author prefers to quote and introduce the views of his co-workers rather than to

obtrude his own opinions as the only ones acceptable. Dental skiagraphy, the localization of foreign bodies, and the cathode rays are very fully considered in a practical and instructive manner.

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HUMAN ANATOMY, including Structure and Development and Practical Considerations, THOS. DWIGHT, M. D., LL. D.; Parkman Professor of Anatomy in Harvard University; J. PLAYFAIR McMURRICH, Ph. D., Professor of Anatomy in the University of Michigan; CARL A. HAMANN, M. D., Professor of Anatomy in Western Reserve University; GEO. A. PIERSOL, M. D., Sc. D., Professor of Anatomy in the University of Pennsylvania; J. WILLIAM WHITE, M. D., Ph. D., LL. D.; Jno. Rhea Barton, Professor of Surgery in the University of Pennsylvania; with 1,734 illustrations, of which 1,522 are original, and largely from dissections by JOHN C. HEISLER, M. D., Professor of Anatomy in the Medico-Chirurgical College of Philadelphia; the whole edited by GEO. A. PIERSOL. Royal octavo, cloth, pp. 2,088. Price, \$7.50. J. B. Lippincott Company, Publishers, Washington Square, Philadelphia, 1907.

This is an entirely American anatomy both in text and illustrations, and marks an important epoch in American medicine and medical publishing. It is the exclusive work of American authors, and will prove to be the "monumental work" in American medicine along the lines of this so highly important fundamental branch or department.

Dr. Dwight took charge of the description of the skeleton, the joints, the gastro-pulmonary system, and the accessory organs of nutrition. To Dr. Hamann was assigned the cerebro-spinal and sympathetic nerves. Dr. McMurrich contributed the systematic description of the muscular system and the vascular system, both blood and lymph. Dr. Piersol, in addition to editorial supervision of the entire work, wrote the introductory, histological, and embryological sections, and contributed the description of the central nervous system, the deep relations of the cranial nerves, the organs of special sense, the carotid, coccygeal, and aortic bodies, and the uro-genital system. The practical considerations were in the able hands of Dr. J. William White, who gave brief descriptions of operative methods where they have seemed necessary to complete the study of an anatomical region or important organ; occasionally because of the practical importance

from an anatomical standpoint, a relatively rare operation has been included. This department of the magnificent work, we regard of the highest value, and will the more cause an imperative demand for it by all working surgeons.

The book is rather large for a student's text-book, but from the large amount of matter of such practical importance, the comprehensive yet concise and clear description of the various parts, tissues, and organs, any student will be well fixed if he secures it.

The illustrations, 1,522 of the entire 1,734 being original, are from dissections of Dr. Heisler, in the most part. The muscles, arteries, and veins are colored, and we regard them as the most practical and clear of any anatomical illustrations yet produced, whether from the drawings of the artist's hand, or the most careful manipulation of the camera. They are not diagrammatic figures, leaving so much to the imagination, but are faithful records of dissections and preparations as they actually appear.

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**THE DIAGNOSIS AND TREATMENT OF DISEASES OF WOMEN.**—By HARRY STURGEON CROSSEN, M. D., Clinical Professor of Gynecology, Washington University; Gynecologist and Chief of Clinic to Washington University Hospital; Associate Gynecologist to St. Louis Mulvanphy Hospital; Consulting Gynecologist to Bethesda, St. Louis Female, and St. Louis City Hospitals; Formerly Superintendent to St. Louis Female Hospital; Fellow of Association of American Obstetricians and Gynecologists; Ex-President St. Louis Obstetrical and Gynecological Society; Member American Medical and Missouri State Medical Associations, and of St. Louis Medical Society, etc., etc. Cloth, 8vo, pp. 799, with seven hundred illustrations. C. V. Mosby Medical Book Publishing Co., Publishers, St. Louis, Mo., 1907.

This work is devoted exclusively to the diagnosis and treatment of diseases of women, as those diseases are met with in the office and at the bedside by the general practitioner. The author says in his preface: "In my experience as a consultant and as a teacher, I find that the two principal stumbling blocks encountered in the way of accurate gynecological work are, first, the difficulty of determining exactly the conditions present in the pelvis, and, second, the lack of a clear understanding of the indications governing the selection of the particular treatment best adapted to



each of the various classes of cases under each disease. Special consideration is given to these important phases of the subject."

The important points, all the way, are presented clearly and systematically; and the arrangement of the text shows not only the facts of a subject, but also the mutual relation of the facts and their bearing and relative importance in the diagnosis and treatment; these necessary facts are not only presented clearly and fully, but unincumbered with unnecessary details.

A marked feature of the work consists in the numerous and beautiful illustrations, it being more profusely illustrated than any work of which we have cognizance, outside special atlases. Of the 700 handsome illustrations, over 220 are original with the author, nearly all being from correct and carefully selected photographs.

It is a strictly new work, from a new author and new publishers; however, it is so admirable in many respects, that authors and publishers of greater experience may well look to their laurels.

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A MANUAL OF DISEASES OF THE NOSE, THROAT, AND EAR. By E. BALDWIN GLEASON, M. D., Clinical Professor of Otology at the Medico-Chirurgical College, Philadelphia. 12mo of 556 pages, profusely illustrated. Philadelphia and London: W. B. SAUNDERS COMPANY, 1907. Flexible leather, \$2.50 net.

This manual is a very concise statement of the essential facts of Rhinology, Laryngology, and Otology.

The more important facts of the anatomy, physiology and pathology of the upper respiratory tract and ear have received careful consideration, so that the volume might prove sufficiently complete for study or reference by undergraduates during their college years and for practitioners taking a post-graduate course in laryngology and otology.

The details of inspection, examination and diagnosis of the nose, throat and ear conditions and the use of the commoner instruments of diagnosis and for the making of applications have received very careful and comparatively lengthy description. The same may be said of minor operations. Methods of treatment

have been simplified as much as possible, so that in most instances only those methods, drugs, and operations have been advised which, by the actual experience of the author, have proved essential to the accomplishment of the desired result.

The book contains 262 engravings, a considerable proportion being original or drawn from dissections made by the author.

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**THE PHYSIOLOGY OF ALIMENTATION.** By DR. MARTIN H. FISHER, Professor of Pathology in the Oakland College of Medicine. First edition, large 12mo. cloth, pages 348, with 30 plates. Price \$2.00. JNO. WILEY & SONS, Publishers, 43-45 East 19th St., New York, 1907.

This excellent monograph is intended primarily for those whose interests lie in Physiology as a science contributory to medicine. It is not a complete review of the physiology of the alimentary tract, but only such an outline of the subject as Professor Fischer has been presenting to his students.

This volume is intended to be the first of a series of monographs dealing with various phases of physiology. Some effort has been made to embody a few of the ideas that modern physiological investigations have brought with them, but how long even these recent conceptions will stand cannot be foreseen.

The mechanical phenomena, the digestive fluids, the enzymes, the digestive secretions, and the alimentary tract as an absorptive and excretory system are fully and ably considered.

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**SURGERY: ITS PRINCIPLES AND PRACTICE.** In five volumes. By 66 eminent surgeons. Edited by W. W. KEEN, M. D., LL. D., Hon. F. R. C. S., Eng. and Edin., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia. *Volume II.* Octavo of 920 pages, with 572 text-illustrations and 9 colored plates. Philadelphia and London: W. B. SAUNDERS COMPANY, 1907. Per volume: Cloth, \$7.00 net; Half Morocco, \$8.00 net.

This magnificent work, in five octavo volumes, covers the entire field of surgery in so thorough and complete a manner and with such a wealth of practical detail that no surgeon or practitioner can well be without it. The authors of the various articles are men whose names are specially associated with the subjects

upon which they have written,—*renowned specialists with international reputations accepted as authorities throughout the surgical world.* For the work does not express the thought of any one country alone: it is world-wide in character, representing the best surgical practice of to-day. *Every chapter in the work represents a complete and original monograph by an authority of recognized eminence.* The entire work is written by the leaders of modern surgery.

In the second volume which has been unavoidably delayed we find the following articles comprehensively, concisely and practically considered:— Diseases of the Bones, by Edward Hall Nicholls, M. D., of Harvard; Fractures, by Daniel N. Eisendrath, M. D., of University of Illinois; Surgery of the Joints, (Clinical Part), by Robert W. Lovett, M. D. and Edward Hall Nicholls, M. D., of Harvard; Dislocations, by Daniel N. Eisendrath, M. D.; Surgery of the Muscles, Tendons, and Bursæ, by John Fairbairn Binnie, M. D., of University of Kansas; Orthopædic Surgery, by Robert W. Lovett, M. D.; Surgery of the Lymphatic System, by Frederic Henry Gerrish, M. D., of Bowdoin College; Surgery of the Skin, by John A. Fordyce, M. D., of University of Bellevue Hospital Medical College; Surgical Disorders of the Nervous System, by William G. Spiller, M. D., University of Pennsylvania; Surgery of the Nerves, by George Woolsey, M. D., of Cornell University; Traumatic Neurasthenia, Hysteria and Insanity, by F. X. Dercum, M. D., of Jefferson Medical College; Surgery among the Insane and the Surgery of Insanity, by John Chalmers DaCosta, M. D., of Jefferson Medical College and Surgery of the Spine, by George Woolsey, M. D.

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TREATMENT OF THE DISEASES OF CHILDREN. By CHARLES GILMORE KERLEY, M. D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital, etc. Octavo volume of 597 pages, illustrated. Philadelphia and London: W. B. SAUNDERS COMPANY, 1907. Cloth, \$5.00 net; Half Morocco, 6.50 net.

There has long existed the need of some modern work from which the general practitioner could obtain quickly the desired information on any disease of childhood; a book that would ex-

press the latest therapeutic thought, stated clearly, concisely and definitely. Dr. Kerley has supplied just such a work — a practical book, planned and written for the practitioner's daily use. *Modern methods of management and treatment are given in greater detail than has ever before been attempted*; and the means and methods prescribed have the distinct advantage of having been drawn from actual clinical experience. In every case the therapeutic directions given are definite and complete, *telling just what measures should be instituted*, what drugs given, and in many cases valuable prescriptions are included. There is a large chapter devoted to therapeutic measures other than drugs, and *an excellent illustrated chapter on Gymnastic Therapeutics*, giving explicit directions for the correction of certain abnormalities in which gymnastics have proved efficacious. A large chapter on Drugs and Drug Dosage will be found extremely helpful to the practitioner.

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A TEXT-BOOK OF PRACTICAL DIAGNOSIS. The Use of Symptoms in the Diagnosis of Disease. By HOBART AMORY HARE, M. D., Professor of Therapeutics in the Jefferson Medical College of Philadelphia. New (6th) edition, thoroughly revised and rewritten. Octavo, 616 pages, with 203 engravings and 16 full-page plates. Cloth, \$4.50, net; leather, \$5.50, net. LEA BROTHERS & Co., Philadelphia and New York, 1907.

Professor Hare is as resourceful in his literary methods as in practice, and in his *Diagnosis* he has produced a work which must have taxed his ingenuity and industry, but he has made a straight and smooth path for his readers. That they have been prompt and steadfast in appreciation is shown by the call for six editions.

The plan of the work is exactly the reverse of the usual book on Diagnosis, which analyzes diseases into symptoms and requires the reader to recombine them when meeting a case. Dr. Hare's method might be termed the natural way, as he approaches his subject as the physician must approach his patient, namely, *symptoms first*, and upbuilds his diagnosis on these units. Thus the discovery of any marked symptom, such as vomiting, leads the reader to the point where its diagnostic significance is discussed and the differentiation of the various conditions in which it may

occur. The whole field is covered in this convenient way. Instructive and typical engravings and plates are liberally employed. The revision for this new edition has been most thorough, bringing the volume well up to the latest knowledge.

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## *Selections.*

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THE DIAGNOSIS OF DEATH.—The numerous cases of inhumation of individuals who were not dead, fill us with a shudder of the horrible and would make good material for tales of the horrible such as Edgar Allen Poe delighted to write. We have known of many cases of illness in which the patients exacted a promise to have a knife driven through the heart before they were buried. The modern practice of embalming has rendered all such precautions unnecessary, but the question still remains an interesting one on the certain method of determining that death has taken place. We will not enter here into a consideration of the more modern ones which are supposed to be founded upon incontestible scientific facts. One diligent investigator, after many years of research, finally settled the matter to his own satisfaction if not to that of others. He very plainly stated that when putrefaction had begun it was certain that death had taken place. The majority would prefer to have the body embalmed. Another author, who has devoted quite some time to the subject, claims that when death takes place, sulphuretted hydrogen develops in the upper air passages. His test is founded upon this and consists of placing acetate of lead paper in the nostrils. If death has taken place, the paper is discolored and it may be positively said that death has taken place.

In the latest contribution on the subject the idea is to determine whether there is still life or not, in order, if not extinct, that renewed efforts may be made to resuscitate a patient. The method which has been devised is a very simple one. An instillation of sulphuric ether is made in the eye, and this produces a transient redness which is renewed at each instillation. The method is certainly simple and easy of application.—*Medical Era.*

**SURGERY IN DIABETES.**—Wiener (*Medical Record*, May 4, 1907) deals exhaustively with the question of performing surgical operations in diabetic subjects. In diseases which arise during the course of diabetes but independently of it, and which require surgical interference, there should be no hesitation about operating, for the wounds will heal and the mortality will be but little different from that seen in non-diabetic patients. When the surgical condition is a result or complication of diabetes, the problem is a much more serious one. The principal dangers to diabetics under surgical procedure are the anesthesia, infection, and hemorrhage. Ether and chloroform should be avoided as much as possible. Nitrous oxide, spinal anesthesia, and local anesthesia should be chosen where possible. The dread of operation and loss of fluid by preliminary purging and fasting contribute to the intercurrent of coma in diabetic patients operated upon. Asepsis should be most rigid, and antiseptics should not be allowed to come into contact with the wound, as they still further lower the vitality of the tissues. In cases of abscesses, to which diabetics are prone, the rule should be early and free incision, as these patients endure suppurative processes very badly.

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**MANAGEMENT OF THE THIRD STAGE OF LABOR.**—John W. Winston of Norfolk, Va., considers the management of the third stage of labor quite as important as that of the other two, since its proper conduct will result in a normal uterus, free from catarrhs and displacement. The removal of the placenta should take place promptly so as to secure good contraction of the uterus. The uterus should be watched for an hour after its delivery, and removal should be facilitated by gentle friction, and if necessary by manual removal under antiseptic precautions. All tears should be repaired promptly under anesthesia. Hemorrhage should be attended to at once. Douching is not regarded by the author as essential. Ergot has value but disadvantages as well. The binder is not regarded favorably.—*Medical Record*, Oct. 12, 1907.







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